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ABSTRACT

Opening addresses, conference papers, and summaries of group discussions are contained in these proceedings. Papers include: challenges for higher education in southeast Asia (Makaminan Makagiansar); higher education in Asian countries today (Gwee Yee Hean); changing profiles of university students in southeast Asia (Nuanper Wichiarajote); a critical assessment of university teaching (Hulman Sinaga); curriculum development in southeast Asian universities, new approaches (Partomo M. Alibazah); and alternatives for teaching-learning processes (Ernesto O. Javier). Discussions addressed: national development and optimization of teaching-learning processes; higher education institutions and optimization of teaching-learning processes; university students, teachers, and optimization; and curriculum development and optimization. (MSE)

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ED 149 695

ALTERNATIVES FOR OPTIMIZATION OF TEACHING-LEARNING PROCESSES IN SOUTHEAST ASIAN UNIVERSITIES

Proceedings of the Regional Conference
Held in Penang, Malaysia
11 to 13 December 1975

Muhammadi
Editor

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PREFACE

The Regional Institute of Higher Education and Development (RIHED) had the privilege to convene a Regional Conference on "Alternatives for Optimization of Teaching-Learning Processes in Southeast Asian Universities" in Penang, Malaysia from 11 to 13 December 1975. Thirty-six participants from Indonesia, Malaysia, Philippines, Singapore and Thailand as well as representatives from the Agricultural Development Council (ADC), Institute of International Education (IIE), and Southeast Asian Ministers of Education Secretariat (SEAMES) were present at the conference for the deliberations.

In this conference an attempt was made to examine ways and means by which teaching-learning processes can be optimized in order to improve the effectiveness of higher education, thus enhancing the contributions of higher education to national development.

The acceptance of the modern idea that higher education can participate in national development must depend on a situation in which higher education has the capability to contribute effectively to that development. In performing its three basic functions, i.e. education, research, and service to society, higher education is regarded as the source for high-level manpower and growth of knowledge, the two most strategic factors in national development. Several environmental forces, e.g. the popular aspirations for higher education that lead to phenomenal increase in university enrolment, the world-wide development in science and technology, and the need for more sophistication in national development, have accelerated the demand for a more effective higher education. The inherently high inertia and the scarcity of resources have constrained higher education systems in adapting their internal processes to new external necessities. For this reason, the conference was set up to examine new approaches of teaching-learning processes in Southeast Asian universities in order to optimize the contributions of higher education to national development.

The proceedings of the conference comprise three parts, i.e. a collection of the papers presented at the conference, the reports of the group discussions, and the conclusions and recommendations of the conference.

In producing this report the editor is grateful for the cooperation of the participants of the conference, and the assistance of Dr. Annie B. Elliott, Institute of Education, Singapore and all the staff of RIHED.

1977 **Muhammadi**

WELCOMING ADDRESS BY DR. AMNUAY TAPINGKAE, DIRECTOR, RIHED

On behalf of the Regional Institute of Higher Education and Development, may I extend my warmest welcome to you for your presence at the opening ceremony of the Regional Conference on "Alternatives for Optimization of Teaching-Learning Processes in Southeast Asian Universities". RIHED, which is an intergovernmental organization in the Southeast Asian region, has been established to stimulate and facilitate cooperation among universities and governments of the countries in Southeast Asia, and to enhance the contributions of higher education to the social and economic development of the countries in the region and of the region as a whole. To achieve such objectives, RIHED, among many other activities and programmes, sponsors conferences and seminars both on the national and international levels. In bringing together scholars and administrators involved in the planning and operation of institutions of higher education and those in government agencies responsible for decisions affecting higher education development, it is hoped that meaningful discussion on problems and development will take place. Subsequently, certain difficult problems may be solved and future directions may be found.

In the past five years of its existence, the Regional Institute of Higher Education and Development has convened and sponsored international conferences, workshops and national seminars in all of its member countries. This Regional Conference is the second international conference to be hosted by Malaysia.

The developing countries have undergone rapid changes, brought about by a number of concurrent world-wide developments in science and technology, in economic and political affairs, and in demographic and social structures. These changes have generated new demands and challenges to the educational systems.

The educational systems have also grown and changed. But they have adapted all too slowly to the faster pace of the events which are on the move all around them. The consequent disparity between the educational systems and their environments is the essence of the world-wide problem in education.

There are a number of causes for this disparity. The increase in popular aspiration for higher education has led to demands for increased student enrolment and better quality and variety of educational content. The scarcity of resources has kept educational systems from responding more fully to these new demands. The inherent inertia of the educational systems has caused them to respond too slowly in adapting their internal affairs to new external necessities. The inertia of societies themselves, i.e. the traditional attitudes, prestige and incentive patterns, and institutional structures, has prevented them from making the optimal use of higher education to foster national development.

If the problem is to be overcome there must be mutual adjustment and adaptation by both education and society. To play their part in solving this problem, the educational systems are required to make self-appraisal and to search for new ideas to meet the new requirements of the times. The problems of the educational systems could be approached by identifying the challenges for higher education due to the rapid environmental changes, analyzing the teaching-learning processes within the universities, assessing critically the experiences of the teachers and students, and then formulating new concepts of effective curriculum development and educational technologies to optimize student development.

In contemplating this problem further, the Regional Institute of Higher

Education and Development is pleased to convene a Regional Conference on "Alternatives for Optimization of Teaching-Learning Processes in Southeast Asian Universities".

The main objective of the Regional Conference is to search for the ways by which effective teaching-learning processes can optimize student development. In keeping with the objectives of RIHED, this Regional Conference is convened for the purpose of identifying priority problems connected with the contributions of higher education to institutional, national, and regional development. The nature of the discussions will be conceptual, actively concerned with shaping and designing the future, and policy-oriented, so that the discussions can be used as bases for further studies and policy recommendations.

Knowledgeable scholars and leaders representing university communities, and authorities representing national educational agencies from RIHED member countries as well as from other regional and international agencies, have been invited to attend this Regional Conference to bring their experiences and insights to bear on this problem.

This Conference, which will begin its first session this afternoon, will be preceded by a keynote address by a distinguished scholar and administrator of Indonesia, Prof. Dr. Makaminan Makagiansar, Director-General of Higher Education in the Department of Education and Culture of the Government of Indonesia, and concurrently Chairman of RIHED. Prof. Makagiansar will deliver his keynote address on the topic "Challenges for Higher Education in Southeast Asia". In addition to this keynote address, the Conference will concern itself with five important topics, namely:

1. Higher Education in Asean Countries Today.
2. Changing Profiles of University Students in Southeast Asia.
3. A Critical Assessment of Univeristy Teaching.
4. Curriculum Development in Southeast Asian Universities: New Approaches.
5. Alternatives for Teaching-Learning Processes in Southeast Asian Universities.

The presentations of the papers will be followed by group discussions. In these group discussions, the Conference participants will attempt to integrate the discussions of the papers and other responses and then formulate conclusions and recommendations, particularly on the question, "How can teaching-learning processes be made more effective to optimize student development"? It is hoped that insights and recommendations from this Conference will be useful to universities and governments in the Southeast Asian region helping them to effect changes in the teaching-learning processes so that the resources available will be put to optimal usage.

The Regional Institute of Higher Education and Development is grateful to the Universiti Sains Malaysia and the Government of Malaysia for hosting this Regional Conference. As a host institution, the Universiti Sains Malaysia has been extremely generous in making available to RIHED its physical facilities as well as the services of the staff and faculty. I should also like to take this opportunity to express our sincere gratitude to Y.A.M. Justice Tan Sri Raja Azlan Shah, Chairman of the Higher Education Advisory Council, for his cooperation and interest in the preparations for and the conducting of this Conference. This cooperative spirit reflects the educational partnership that RIHED has been promoting in the Southeast Asian region.

The Regional Institute of Higher Education and Development, the Universiti Sains Malaysia, and the participants of this Conference are highly honoured by the presence of the Honourable Minister of Education at this official opening of the Conference today. I now have great pleasure in inviting the Honourable Minister of Education to address you and to declare this Regional Conference open.

OPENING ADDRESS BY DR. MAHATHIR BIN MOHAMAD[1]
THE HONOURABLE MINISTER OF EDUCATION, MALAYSIA

It gives me great pleasure to be with you this morning and I feel honoured to have been invited to address this gathering of distinguished scholars, university administrators and government officials from Southeast Asian countries as well as representatives of international organizations and agencies. On behalf of the Malaysian Government, I wish to extend our warmest greetings to all of you and wish you all "Selamat Datang dan Selamat Bersidang".

Your choice of the Universiti Sains Malaysia as the venue for the Regional Conference brings honour not only to the University and the island of Penang but also to Malaysia. Many of you have travelled hundreds of miles to Penang, perhaps for the first time. I am aware from your programme that you have a very heavy and tight schedule during these three days, but I am sure you will find some time after your meetings to do some visiting and sightseeing in and around Penang. For our part, we will do our best to make your stay here a pleasant and memorable one.

Malaysia is indeed pleased to be a member of the Regional Institute of Higher Education and Development. In this era of exciting developments in all fields, RIHED reflects an effort to promote regional cooperation and coordination in the field of higher education and development. Although RIHED has been in existence for only five years, within this short period it has organized and sponsored many international conferences, workshops and national seminars in all of its member countries. In December, 1972 a RIHED Workshop was held here and this Regional Conference today is the second one to be hosted by Penang.

I am glad to see among the papers to be considered during the course of this conference, there is one entitled "A Critical Assessment of University Teaching". This appears to me a subject of vital concern to us all, as university teachers represent a university's most expensive resource. The popular conception of the function of a university teacher is that of giving lectures with one or two additional activities. It is scarcely realized that his academic responsibilities embrace a wide variety of related functions, which can usefully be distinguished since each of them requires a particular skill and independent commitment of time and effort. These include lecturing, tutoring and seminar leadership; curriculum design and development; educational counselling of students; marking, assessing and examining; related administrative tasks such as preparations of reading lists; and of course attending meetings. These are not discrete activities; they can and do overlap and complement each other. All these various functions usually have to be performed by the individual academic, in addition to his research, public service and in some cases, general administrative responsibilities.

The university teacher is in fact a manager, though this description would not usually be applied to him in university circles. He is the manager of the teaching-learning process for those students who have been assigned to him. In this capacity, he is constantly involved in planning, particularly in regard to the learning sequence to be followed by the students associated with his course, and also in taking decisions, often of a very practical kind, regarding the arrangement of his teaching. There has emerged of late a growing concern about the effectiveness of academic staff in carrying out their teaching responsibilities. It has been pointed out that while rigorous professional training is required, varying from one to two years for teachers at primary and secondary levels, no such training is thought necessary for those who want to teach in a university. The one important criterion for selection as a university teacher is only his academic qualification. In fact no other profession permits its members to engage in their responsibilities without some form of formal preparation and guidance. It is almost as if teaching at the university level requires no skill. I would therefore strongly urge that certain consideration be given to this issue, and that some sort of training programme be worked out, in order to ensure that in the long run the university teachers can effectively contribute to the optimal student development.

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[1] Dr. Mahathir bin Mohamad is concurrently the Deputy Prime Minister of Malaysia.

While transmission of knowledge is the mission of teaching, the accumulation of knowldege is the mission of scholarship and research. It is one of the conventional wisdoms that teaching in a university which does not spring from research and scholarship is nearly always second hand and second rate. I have my reservations about this. Firstly, other things being equal, good researchers make good teachers, but this does not mean, in a world where other things and especially teaching abilities are not equal, that every active researcher will be a better teacher than every academic who does little or no research. Secondly, where the researcher has the ability to be a good teacher, an excessive preoccupation with research can impair the quality of his teaching long before he gets to the point at which his research time encroaches on his other duties. And thirdly, even though in general the researcher is the better teacher at university level, there may be some elementary parts of some subjects taught at universities which the teacher who does no research may teach equally well or even better.

On the other hand, I do not subscribe to the view that research and scholarship should be abandoned completely, and that universities should become mere teaching institutes. What I mean is that since developing countries like ours are not prosperous enough to enable us to be engaged in research and scholarship pertaining to every branch of knowledge, there is a greater need for each of our universities to specialize in a particular field in which it can excel. We must remember that knowledge is growing so fast that no university can pretend to cover all areas — at least not with any hope of maintaining high professional standards. Even a single department of physics or economics must decide to concentrate on certain areas within its respective field. Uncontrolled growth may result, therefore, from an uncontrolled selection of areas for excellence, and it follows that a university can and must choose from among a wide range of possibilities. While specializing, a university must be vigilant against the danger of over specialization.

I am confident that in your corporate effort you will be able to identify and analyze problems in connection with the teaching-learning processes and to suggest appropriate solutions and actions in keeping with the challenges and needs of our societies. I assume that RIHED will present the recommendations arising from this Conference to the respective governments so that implementations can be ensured. It is important that RIHED, as an inter-governmental organization, should serve as a medium for the interchange of ideas in conferences, seminars, research and publications, and provide cumulative benefits not only for individual countries but also for the region of Southeast Asia as a whole. I wish this international conference every success.

Ladies and Gentlemen, at this auspicious moment, it is a great pleasure for me to declare this Conference open.

PART I
CONFERENCE PAPERS

CHALLENGES FOR HIGHER EDUCATION IN SOUTHEAST ASIA

Makaminan Makagiansar[1]

I would like to share with you some of my notions on the prospects of higher education in Southeast Asia, and especially to discuss with you some of the major concerns that have emerged during the course of my exposure to the development of higher education in the region. Because of time constraint, and also in terms of the logic of my presentation, I propose not to talk about the technicalities of the development of higher education. I will refrain from talking about input-output ratios, faculty and staff development, student development, research, employment and utilization of graduates, community services, etc. All these subjects, nonetheless, are of fundamental importance. I would like to emphasize that their very importance induces us to continually analyze and reflect upon these problems, and to put the results of our analysis and reflection into concrete and constructive action. I propose to discuss topics which constitute important determinants for the future of higher education in Southeast Asia, and I intend to highlight four major factors under the headings: enculturation, forward orientation, adaptability and recognition of leadership requirements.

When we talk about the function of higher education, higher education is conceived as a primary instrument for communicating or transmitting knowledge. We may test this concept empirically by looking at the development programmes of universities in different parts of the region. This morning, Dr. Mahathir Mohamad, the Minister of Education of Malaysia, referred to possible shortcomings in this transmission of knowledge. Having mastered a body of knowledge does not necessarily imply that one has also mastered the techniques of communicating that very knowledge.

Another important aspect of higher education, which is of fundamental importance for the future, is the enculturation of higher education. Enculturation implies the integration of cultural heritage, the body of culture, the totality of culture, into the institution of higher education. Enculturation implies the adaptation of the particular instrument or individual to the imperatives of the socio-cultural situation; and being an integral part of the system it also gives direction to the culture itself. What is lacking today is the notion of establishing a meaningful correlation between the system of higher education on the one hand and culture on the other. There is a need to enculture higher education, there is a need to have socio-cultural values impregnate the total fabric of higher education both in transmitting knowledge as well as in nurturing an appropriate climate of thought on the campus. Two papers in the present Conference refer to shortcomings in the application of science and technology in developing countries. In these countries the importing of science and technology into the various sectors of higher education, into the economic structure, or into the society as a whole has often been done without consideration of the basic notion that although science and technology represent a body of knowledge, they also represent a part of the totality of a particular socio-cultural setting. By introducing intermediate or advanced technology, for example, we may consciously or unconsciously import behavioural imperatives into our structures, which may be foreign to our own situation. The importing of knowledge and skills, which may also introduce new values, should be consistent with the growth of our own socio-cultural values. And in speaking about the transmission of knowledge as one of the basic functions of higher education, it would be a great mistake if we consider this function in isolation and do not give due consideration to the interaction between higher education and culture. This is a point we should stress in the future development of higher education. I dare to speculate that if we ignore the enculturation effects of the processes of higher education, we may enter into the present crisis of western civilization, where the mind of man is very much dominated by science and technology, which are not completely integrated into the socio-cultural fabric to which man belongs. In this kind of situation man may easily lose the real purpose of life. Indeed, man creates culture, but at the same time man is also part of culture. Man is both the subject and object of culture, in as much as man is the subject and object of the physical environment. When we change the environment, we will in turn be subjected to those changes in the environment. Our very creation may destroy us. Thus, the enculturation process of higher education is fundamental for the survival of the cultures, which are the strength of society in our region.

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[1] Dr. Makaminan Makagiansar is now the Assistant Director-General for Culture and Communication of Unesco.

The second major factor is the forward orientation of higher education. It seems today that we are too much impressed with short-term benefits. When we talk about research, student development, campus planning, facilities development, input-output ratios, employment problems, we are always attracted by the thoughts of immediate benefits. It seems that short-term considerations have taken hold of us at the expense of long-term considerations. As I have said, man is both the subject and object of culture and environment, and man is also the object and subject of history. If we gather here today in a meeting of scholars, we gather as individuals representing yesterday, today and tomorrow. We have built-in programmes of activities which are oriented towards the past, the present and the future simultaneously. The past and the present determine the future, but concurrently our future aspirations determine the past and the present. These are interacting historical variables translated into behavioural terms. And it is for this reason that I would like to pose the question: to what extent have we been able to orientate the institutions of higher education toward a vision of the future? It is necessary for man to have a dream of the future, in as much as the great religious and great faiths always display a vision of the future. In higher education, what do we conceive of as the future, and how would we like to reach the future? In behavioural terms this would mean that there must be some kind of ideal type of society, or to translate it into RIHED's language, an ideal type of regional cooperation in higher education. In economics, we may be guided by market studies, feasibility studies for investments, etc. The rapid growth of science and technology induces in us attitudes and abilities to foresee future situations. As an example, if we talk about exploitation of natural resources, e.g. rubber, oil, etc., we are always influenced by the thoughts of short-term benefits. We know that with exploitation of the world's natural resources, the physical resources in the world become smaller and smaller. Of course, one can say that there is recycling of natural resources, but we also know that a number of resources cannot be recycled. In the meantime, technology advances so fast today, that a particular technology which has a very good market today may not be marketable in the next five or ten years. My question is: to what extent does higher education foresee this situation, and to what extent does higher education translate into its curricula those scientific developments that enable man to be ready for the future? It is for this reason that if we talk about curricula, we should also talk about programme designs which are related to the extrapolations of trends in industrial development as well as trends in basic and applied research in the world; because if this is not done, our region will always be subservient to the interests of the industrially rich countries.

The third major factor is the need to have that kind of education that enables a man to adapt himself to changing situations. Life today is very different from the life of our parents. Daily we gain a multiplicity of new impressions of changing situations. According to some research, these new environmental parameters do interact with the hormonal regulations of our brain. If this is true, the crowding pattern of human population also interacts with the hormonal regulations of the brain. My hypothesis is that this would require a great deal of adaptability on the part of the human species. Life is becoming more and more hectic, respect for elders has declined, socio-cultural values change, new technology emerges, new situations emerge, to which man must continuously adapt himself, otherwise he will become a neurotic or psychotic person. This would mean that one of the demands of our time is that in the transmission of knowledge, in the nurturing of values which enable man to live as a meaningful socio-cultural being, there is a need to introduce learning processes which enable man to adapt himself to rapidly changing situations. In teaching electronics or sociology, for example, to what extent have we given our students the ability to master this particular knowledge, and equipped them with the ability to adapt to the new and changing situations? To what extent have we been able to introduce a new perspective into the domain of learning processes, a perspective which enables our students to look not only at the present but also to relate to the potential changes which are the results of their activities? Man has been endowed with an ability to change his environment through science and technology, but at the same time he is also subject to the changes brought about by his own creation. Therefore, man should be adaptable.

The fourth major factor is the need for identifying the stereotype of leadership. If we talk with educators, it become apparent that we talk very little about what kind of students or what kind of graduates we would like to have five, ten, or fifteen years from now. We assume that what we do today will necessarily benefit the future. Alas, this is not true! As I related earlier in connection with the need for forward orientation, there is a need for us to envisage the kind of leadership that we would like to produce through higher education. As an example in history, if Napoleon Bonaparte had lived not at the end of eighteenth century but one century later, I doubt very much whether we would know him as he is known today, because the environmental variables might not have given him the opportunity to emerge as a historical figure. In other words, every historical epoch requires a certain stereotype of leader. If we look at the recent history of developing countries; at the time of nation building we need a man with the ability for mass organization, a man who can talk in passionate language to unite the nation; but once this stage has passed, we need a man who can develop the nation, a man who is an economist, a man who can think about the future. Every historical epoch needs a different kind of leader. This is also true of university leadership. The kind of university head needed ten years ago was a very different stereotype from the one needed today, or the one we may need five years from now.

I have touched on some major factors which are determinants for the development of higher education in Southeast Asia. I have presented the problem of enculturation of higher education, the problem of forward orientation, the problem of adaptive attitude toward change, and the problem of the need to identify and design a stereotype of leadership. We should look at these four problems not in isolation but integrated dynamically with the region. The process of higher education does not consist of technical matters alone; the process should also imply the development of individuals who feel themselves morally responsible for the well-being and the future of their society.

Human perception is the basis of human thought, human thought determines human action, and human action determines human intervention into nature and into his own species. Therefore it is very important to introduce to the developing students certain imperatives that enable them to nurture a hope for the future. Most of the time students are being exposed to the pathology of societal development. This is a one-sided view. Besides looking at the pathology of the society, there is also a need to look at the possibilities, potentialities and hopes that the society can offer. In the process of higher education, there is a need to nurture the hope for a happy future. In nurturing this hope there is a moral imperative that we are all responsible for our planet, that we are all responsible for the human species. My question is: to what extent have we introduced into the process of higher education these considerations of moral responsibilities?

Southeast Asia has a very challenging potential, and it is our determination that the region will have a glorious future. We want to make Southeast Asia an area of peace and stability. We want to make Southeast Asia a region where we can share common experiences. There are suggestions to develop a common market in Southeast Asia, whereby economic interdependencies and cooperation will enable us to improve the standard of life in the region. We also want to make Southeast Asia a cultural community with each culture recognizing and respecting the diversities of the others. If this is so, to what extent have we introduced into our teaching processes ideas that enable a student to feel himself not only as Malaysian, Singaporean, Thai or Indonesian, but also to feel himself responsible for the region as a whole? We teach them about Malaysia, Singapore, Thailand or Indonesia, but in our teaching about these countries have we introduced into their behavioural patterns a sense of responsibility for the future of the region? What we need are people who loved their country, love their region and love their world. This planet of ours is becoming smaller and smaller thanks to the advance of modern communication. This in itself brings about a certain responsibility, a responsibility for our own nations, a responsibility for the region, and a responsibility for the planet as a whole.

In societal development today, there is an irony that in spite of the growth of GNP, there is a widening gap between the rich and the poor countries. The introduction of a new international order tries to restore and correct the present trends. At the micro-level, there is the inherent danger of a widening gap between income levels, a widening gap between rural and urban settlements, a widening gap of effective political power, a widening gap between cultural levels. My question is: is higher education today striving to narrow these widening gaps? This is a very basic question, because if the widening of these gaps is allowed to continue, then the price that we have to pay may be very dear. In the development of higher education we must take into consideration the dangers which are built into the very fabric of national, regional and international situations. The message that I would put across is that we, as organizers, as scholars, as policy decision makers, should take into account the potentialities of the nation, the region and the world as a whole, should then develop those potentialities in the substance of both material and moral thinking, and should let this become the basis for developing common values that will unite the region as a whole. Higher education has a very important role to play, it will have to develop all these potentialities to obtain peace and stability in the region.

These are some of my notions about the challenges for higher education in Southeast Asia. I have touched on some major problems, which I hope will stimulate further discussion in the future. Finally I would like to appeal to all of you to challenge once again the basic assumptions upon which we conduct our life, the basic assumptions upon which we teach, and the basic assumptions upon which we develop our higher education system.

HIGHER EDUCATION IN ASEAN COUNTRIES TODAY

Gwee Yee Hean

When T.H. Silcock visited Southeast Asian universities in 1960 and wrote his *Southeast Asian University: A Comparative Account of Some Development Problems*, his task did not appear to be a particularly difficult one.[1] To be sure, the universities were then on the threshold, if not already in the process of radical change, but Silcock could still be on familiar grounds as he stepped into these universities, for they were yet recognizable as close prototypes of their western parent institutions and shared many values in common. Thus topics like academic freedom, university autonomy, international standards, fundamental research, etc., featured prominently in his report, all of which were implicitly or explicitly assumed to be meaningful and unequivocal both to himself and to his readers. In fairness to Silcock, I must hasten to add that he noted some signs of "conflicts", particularly those between the university and the government, and that he made occasional prophetic remarks on the changes that would soon and inevitably engulf these institutions. One thing seems particularly surprising, though: in spite of the author's background in economics and experience in developing countries, "development" as it turned out in his report refers more to the historical evolution of these universities than to the broader sense currently emphasized and understood. And in the index of his book, words like "planning", "manpower", "relevance", "national development", etc., are conspicuous by their absence. Universities then, it would appear, were still very much what they used to be.

In contrast, both the orientation in, and the approach to, the study of Southeast Asian universities turned out to be fundamentally different from those of Silcock when the UNESCO/IAU commissioned "The study of the role of institutions of higher education in the development of countries in Southeast Asia". Work on this project began in September 1961, and the completed report appeared in print in 1967. These massive volumes contain a wealth of material on the subject, and provide comparative data not only for inter-country studies, but also for follow-up longitudinal studies which could profitably be undertaken by, for example, a body like RIHED — itself the product of the implementation of one of the recommendations contained in the report.[2] One outstanding feature of the report is the emphasis placed on development, particularly economic, though its social and cultural components are not entirely glossed over. In fact, so much weight appears to have been placed on the need for rapid development, and for tertiary institutions to consciously play a role in this development, that even a cursory reader of the report cannot but feel that these central concerns pose a tremendous challenge to the very continued existence of universities — if not all tertiary institutions — as they then were. In short, the tenor of the report seems to question the wisdom of allowing such institutions to exist in their own right and to function in their own ways, oblivious of the role they can and ought to play in the development of the societies which ultimately support them.

It is in this context that the changes currently taking place in Southeast Asian institutions of higher learning must be viewed and evaluated. In what follows, I shall attempt to give a general, impressionistic account — for to do more than this in a situation of rapid and revolutionary changes is well nigh impossible — of what I regard as significant and worth noting. In particular, I shall concern myself with those institutions in the Asean countries which I recently had the good fortune to visit, and where I talked with those who are concerned with development.[3] Finally I shall draw certain conclusions with regard to the current scene and indicate what I consider to be likely trends in the immediate future.

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[1] T.H. Silcock, *Southeast Asian University: A Comparative Account of Some Development Problems*, Durham, North Carolina: Duke University Press, 1964.

[2] UNESCO/IAU, *Higher Education and Development in Southeast Asia*, Paris: UNESCO and the International Association of Universities, 1967, 3 volumes.

The interpretation of the term "higher education" still poses a problem in the region. This is because of the wide variety of institutions which are to be found therein, and no matter how one attempts to define the term, the line of demarcation between one type of institution and another often proves to be difficult to draw. This is further complicated by the different systems of secondary education which provide the student inputs. A third complication arises from differences in evaluation: if, for example, music and art academies are included, what about theological seminaries and dancing schools? And if in this regard "academic content" is taken as a criterion for inclusion, then before long there will be quarrels about what the term "academic" really means, and the contenders will inevitably be led to areas where various shades of grey obtain. The UNESCO/IAU report referred to earlier simply defined "higher education" as that provided by "institutions which offer at least two years of study beyond the standard secondary school (or its equivalent) of the country concerned".[4] This is a useful though somewhat oversimplified definition, and will be generally followed in this paper, though I would personally prefer to be a little more restrictive in its interpretation by not including all forms of post-secondary education as coming within the ambit of higher education.

"Development" as understood today includes both its economic and non-economic aspects, and is generally assumed to lead to improved or desirable states of welfare for the people concerned. It is further assumed that development can be planned if its objectives are made operational and the strategies for their realization duly mapped out. Owing to the fact that education is considered to be an important factor in development, the influence exerted by economists and planners in the formulation of educational policy is gaining in importance. Even universities which used to enjoy a considerable degree of autonomy and regarded their preeminent position with pride and prejudice are now gradually, if not already, brought within the ambit of national planning and control. Wittingly or unwittingly we have not only bid "farewell to the ivory tower" — to borrow the title of J.A. Cory's recent book on universities in transition — but also demolished it for good. University development is now part and parcel of the national overall planning process.

The acceptance of a posture of closely relating the provision of higher education to overall national needs — no matter how these are understood — is one of the most crucial factors that has triggered off the changes that we now experience in the Asean higher educational scene. The argument goes somewhat like this: the development of a country depends on the supply of a right mix of educated manpower who can occupy the various strategic positions and make the economy tick. The production of the highest level of such manpower naturally falls within the province of the institutions of higher learning. But just as under-production results in shortages of manpower and retardation of development, over-production can also cause wastage and end up in frustration. Hence it is imperative that the goals and objectives, organization and structures, supply and demand, quantity and quality, teaching-learning, and many other related problem areas should be examined in order to ensure that they are attuned to the overall needs of national development. Such an examination at the national level will also ensure that efforts are coordinated and unnecessary duplication avoided. In developing countries where the costs of education are comparatively high and financial resources limited, a system of priorities has to be worked out and this in turn favours some form of central planning and control. At the institutional level, dependence on those who control the purse strings makes conformity almost inevitable.

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[3] The writer is grateful to RIHED for arranging these visits to Asean countries in November 1975.

[4] UNESCO/IAU, *op. cit.*, Vol. I, p. 20.

But planning is notoriously difficult in free countries. Unlike others which not only draw up plans but also have the absolute power to make them work, the free countries have to face problems which are often beyond their control and beyond their ability to solve. Moreover there are far too many variables and even imponderables to be taken into account. In fact, very often meticulously prepared plans turn out to be widely off the mark no sooner than they have appeared in print.

The planning activities in the sphere of higher education which are currently going on in Asean countries reflect not only differences in philosophy but also in approach, and the final blue prints may vary from impressive manpower demand and supply projections to what may be regarded as nothing more than budgetary estimates. In between the two extremes are documents of various descriptions which bear some semblance of planning, either expressed in the form of guidelines or policy statements. These often contain valuable statistical data which can prove to be of value to the administrators concerned.

Planning can also take place at the institutional level, either at the request of the central planning body (as when the Indonesian universities were invited to submit "master plans" to the government in 1973) or as a result of the institution's own initiative (as the University of Santo Tomas in the Philippines has been doing for a number of years with Ford Foundation support.[5]) Even at this "grassroot" level, planning is also not without its problems. Take the same two examples cited. When the master plans of the forty Indonesian state universities were received and studied by the government, it was found — so I was given to understand — that not much use could be made of them in working out a realistic overall national plan for their development. Something apparently has been found wanting. The planning which is currently going on in the University of Santo Tomas is quite different in approach and nature, and is intended to serve a different purpose. Briefly, it attempts to make a comprehensive analysis of the Greater Manila system of higher education in the light of which the university could plan its own development. In collecting the basic data required for such a study, many surveys were commissioned and the collected data analyzed. The final outcome of this novel approach to institutional planning is awaited with keen interest, but it is yet too early to make any comment as to its reliability and efficacy. The time-span required for the evaluation of an educational innovation, if indeed it can be objectively evaluated at all, is unfortunately an unduly long one.

There can be no doubt that with the growing importance attached to planning, not only will the quality of data collection be improved, but the techniques of planning will also become more refined and sophisticated. In Thailand, for example, I have been given to understand that the technique of cost-benefit analysis is being applied to the study of university course offerings field by field, while the supply and demand situation of university graduates is being carefully assessed. In Indonesia and the Philippines, with their larger numbers of institutions of higher learning — both public and private — the role of planning is assuming ever greater significance and resulting in attempts at "consolidation" (Indonesia) and "integration" (Philippines). In Malaysia the Higher Education Advisory Council which was established in 1972 is playing its part in advising the Minister of Education on matters pertaining to the development of higher education, while in Singapore the two universities together with the Institute of Education and the post-secondary technical institutions — the Polytechnic and the Ngee Ann Technical College — are statutory bodies which coordinate their manpower-supply policies through the appropriate ministries concerned. Unfortunately published data on such activities are not made readily available to the public, and further comment on them is impossible. In general, however, it may be safely assumed that some planning is always better than none.

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[5] For Indonesia, see Koesnadi Hardjasoemantri, "Problems of Expansion versus Consolidation of Higher Education in Southeast Asia", in Amnuay Tapingkae, ed., *The Growth of Southeast Asian Universities: Expansion versus Consolidation*, Singapore: RIHED, 1974, p. 105; for University of Santo Tomas, see *The Plan for Planning, Rector's Annual Report 1973-74*, Manila: University of Santo Tomas, 1974.

The foregoing discussion seems to point to the fact that, possibly with very few exceptions, the institutions of higher learning in this region no longer subscribe — or can no longer afford to subscribe — to what Robert Nisbet terms the "academic dogma", namely the conviction that the true mission of such institutions lies in the pursuit of knowledge for its own sake.[6] In fact, the primary concern of both institutions and students today seems to be the quest for relevance to meet immediate needs, however ill-defined the words "relevance" and "needs" may be.[7] As for the average undergraduates, better job opportunities are what they have uppermost in their minds when they sign on for their courses. This pragmatic attitude is reflected even in programmes of post-graduate studies — the *Guidelines to the Graduate Programme at ITB* (Institute of Technology, Bandung), for example, spells out in no uncertain terms that "the existence of a Graduate Programme just for the sake of pursuing academic excellence without a sense of purpose and a sense of anticipation regarding the country's problems of development cannot be justified".[8]

In accepting the dictates of overall national planning as their new mission, institutions of higher education today have undergone a metamorphosis which has significant implications both for the institutions themselves and for the society which they are supposed to serve. To put the perspective right, however, it must be added that in the planning process, academics are often involved and their expertise fully tapped. The transformation of *academe*, therefore, is often as much the result of forces coming from within as from without. But there will always be those who bewail the demise or the degradation of the academic dogma, just as there are those who enthusiastically support not just dialogue between the government and the institutions of higher education but a virtual amalgam, at least in spiritual terms, of the two. It is, however, not the intention here to pass judgment on who is the wiser.

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[6] Robert Nisbet, *The Degradation of the Academic Dogma*, London: Heinemann, 1971.

[7] For an analysis of "relevance" and "needs", see: Kingsley Price, "On Educational Relevance and Irrelevance" in James F. Doyle, ed., *Educational Judgments*, London: Routledge & Kegan Paul, 1973; Gwee Yee Hean, "Needs and their Satisfaction", in *Seminar Report on Higher Education and Social Development*, Bangkok: ASAIHL, 1966.

[8] *Guidelines to the Graduate Programme at ITB*, Bandung: Institute of Technology, 1975 (mimeographed), p. 1.

One of the corollaries of this stance is that even in the selection of students for entry to these institutions — traditionally and logically the prerogative of the teaching staff — non-academic or ultra-academic considerations may be applied at the expense of the academic in either barring "objectionable" students from being selected, or favouring those who on academic grounds alone would not have qualified in the competition for admission: all these could be justified by invoking the principle of "national interest" (as it is defined by the powers-that-be). The "suitability" clearance, based on non-or ultra-academic considerations, that is presently required by students seeking entry into institutions of higher learning in Singapore, is a case in point. Similarly, the sentiments recently expressed by the Malaysian Minister of Education in the Dewan Rakyat regarding the desirability of admitting more *bumiputra* students into tertiary institutions — based, as it were, on a study of the pattern of racial distribution in the country — is another such example.[9] More similar examples in widely different contexts can be cited, but this is enough to show that what may appear to be odd in regard to the ethos of the traditional *academe* can be perfectly understood — and make good sense too — in the light of current thinking in our part of the world.

In the pursuit of relevancy and utility, often interpreted in a narrow sense, the institutions of higher learning today are busily occupied in working out new curricula and new patterns of course offerings. "Curriculum development", once a fashionable term in teacher training circles, is now on the lips of many so-called innovative university administrator. More changes in the curriculum are likely to take place, as the economies of the countries concerned become more and more diversified, and new disciplines are introduced. But, given the choice the students of today will always go for courses which hold out promises of good job opportunities. Already the practical minded are crowding themselves into the professional schools of medicine, law, architecture and engineering, as well as newer ones like business and management studies, accountancy, computer science, agriculture sciences, etc., but shunning some of the traditional disciplines which they consider to lead them nowhere except possibly teaching — which is never too attractive and moreover in some countries has already reached saturation point. Innovative moves are being made to save these less popular disciplines from elimination for want of clientele. These include refashioning of course offerings (i.e. by injecting new elements into the traditional programme or adopting an interdisciplinary approach), combination degrees (i.e. by some junggling the same student can end up with two different degrees instead of one), tagged-on diplomas (i.e. by enabling the degree holder to spend another year on a different or related discipline, securing a saleable diploma at the end of the course, such as B.Sc. with Diploma in Industrial Management, or B.A. with Diploma in Social Work), and other similar tactics. Occasionally an eloquent professor in some less popular discipline may be able to convince his colleagues of the vital importance of his professed subject and so ensure survival in spite of its unpopularity with the general student body, or more successful still, may persuade the authorities to force it down the throat of the students by making it a compulsory course of study. Years spent in *academe* have taught me never to underrate the professor's ability to survive in time of real crisis.

There is just one more point before I close this section, and here I would like to touch on the so-called "social demand" for higher education. For the majority this demand is primarily motivated -- correct me if I am wrong — not so much by a genuine desire for learning for its own sake, as by a desire for the acquisition of the potential power to earn more and enjoy a higher social status in life. To what extent should such demands be met is a question as much of economics as of politics, and there are great variations in the policies of Asean countries in this regard. Even within the same country responsible opinions on the subject often differ. With increasing consciousness of the need for planning, however, the indiscriminate meeting of social demand is giving way to a policy of control and coordination. Even in the Philippines where the American ideal of mass higher education is shared by many, and where moreover the private sector is contributing a great deal towards the provision of this education, the government has been able to introduce a National College Entrance Examination to regulate the admission of students from secondary to post-secondary institutions of learning, the rationale for which is said to be "to promote national development and ultimately help maintain a healthy and viable balance of all types of workers in the manpower stock of the country".[10] Although the first returns indicate that few in fact failed to qualify, the fact that such a screening device can be implemented shows the change of attitude if not of heart in a country noted for her policy of free access. And the acceptance of the device certainly empowers the authorities to monitor the student intake according to their own perception of standards and needs. In Thailand, on the other hand, the demand for university places has exerted so strong a pressure that an outlet has had to be provided to the teeming number of aspirants for higher education by the creation — motivated primarily by political considerations — of the Ramkamhaeng University in 1971, based on the open university concept.[11] Although Indonesia is committed to a policy of consolidation, yet the open-door system or non-degree programmes continue to receive special attention. In Malaysia, the off-campus programme of the Universiti Sains Malaysia in Penang aims at enabling those who could benefit from higher education but have missed such an opportunity to work for their degrees on a part-time basis. The programme, however, differs from the Ramkamhaeng University in many important details. Among the Asean countries, Singapore appears to be particularly careful in jealously guarding the traditional value and standard attached to university degrees, and admission to the two universities is under the control of a joint universities admission board. Once again we have different approaches to the solution of a common problem.

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[9] *Straits Times* (Singapore), December 3, 1975.

It remains for me now to deal very briefly with what I consider to be likely trends in Asean higher education in the immediate future. Crystal gazing in our part of the world is a hazard, and I would have refrained from doing this if it were not for the presence here this afternoon of distinguished scholars from these various countries who, I am sure, would be stimulated to take over the floor. I beg that my comments be taken in this light: as the Chinese saying goes, I am throwing bricks to you in exchange for your jade.

First, I think the Asean countries will be even more committed to the philosophy of democratic planning in the development of their human and other resources; if so, the planning and development of higher education will form one important sector of this overall planning. The implications of this have already been discussed at the beginning of this sessions.

Second, increasing attention is likely to be paid to the quality of higher education, and this in turn will stimulate thinking in areas such as curriculum development and "alternatives for optimization of teaching-learning processes". You will readily notice that the letter is precisely the theme of this conference.

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[10] Presidential Decree No. 146, Republic of the Philippines.

[11] Wichit Srisa-an, "Higher Education Development in Thailand — Country Report" in Amnuay Tapingkae, ed., *The Growth of Southeast Asian Universities: Expansion versus Consolidation*, Singapore: RIHED, 1974, pp. 74-75; Amara Raksasataya, "Ramkhamhaeng: the Open-door University Reexamined", *op. cit.*, p. 142.

Third, attention is also likely to be focussed on the provision of alternative forms of education for those who cannot gain access to institutions of higher learning on the one hand, and on the provision of "post-graduate" (or "graduate" in the American terminology) education for those who ought to benefit from higher forms of training on the other. The former students are likely to be channelled either into new types of post-secondary schools, or into non-formal classes organized by existing institutions of higher learning. The establishment of different models of "open" universities is another possibility, though others (notably Singapore) may for various reasons prefer to make a clear distinction between university and other forms of post-secondary education. The latter students will stimulate the growth of graduate schools or the creation of centres of excellence or specialization within the existing tertiary structure. Some countries will concentrate on building up one such centre of excellence (such as the University of the Philippines in the Philippines), others may prefer to build up a cluster of them based on fields of specialization (as in the case of Indonesia).

Fourth, there will be more innovations. I cannot elaborate further as so many possibilities are open. Currently RIHED is sponsoring a project to look into "innovations in higher education for development" which when completed will document the innovative practices of universities in member countries and hopefully provide ideas and guidelines for university administrators in the region.

Fifth, there is likely to be a multiplicity of reorganizational activities in institutions of higher learning in the region. Examples of this reorganization are mergers, sub-divisions, up or down gradings, and even transformations. One can also expect some changes with regard to the institutions presently supported by private enterprise: perhaps some will eventually secure direct or indirect grants from their government in return for a certain amount of supervision or control; others may be forced to close down for various reasons, financial and otherwise.

Sixth, I prefer not to say much about the so-called student power, as this is best left to the speculation of political scientists and maybe the police! Nonetheless I must note that it is something worth watching, and worth considering too from a purely educational and psychological viewpoint. I think the students of today need more of our guidance rather than less, and a little more concern for their welfare other than the scholastic will go a long way to solve many of their problems.

Seventh and last, and this is more a note of regret than an indication of trend. I refer again to the demolishing of the ivory tower and the demise of the academic dogma, especially the institutional vacuum thus created — an institution that, for many centuries, had been characterised by its community of free scholars and their disinterested search for truth. By virtue of their contributions, the universities became the spearhead of civilization rather than a mere cog in the government machinery. The universities of today are in danger of losing this essential character which seems to be one of the conditions favourable to the fostering of creative growth. Perhaps one day people will wake up and ask, who, after all, are the planners? Perhaps they will also realize that relevancy is a subjective judgment, and that what is relevant to one may be quite irrelevant to another. Or to think of it, perhaps something may even be said for "the relevance of the irrelevant" after all! If the pendulum in the past had swung to one extreme, today it is in danger of going to the other.

DISCUSSIONS

D.A. Tisna Amidjaja

I am in complete sympathy with Mr. Gwee Yee Hean in his comments on the awakening spirit in higher education in search of new avenues of curriculum and programme development to improve its quality, relevance, effectiveness, efficiency, etc. But I must emphasize that however frightening and great our responsibility may be in implementing these innovations to face the new challenges and demands in this changing world, we must not shirk the issue, for to stand still and not to rethink our attitudes would be surely harmful. To a certain extent, I am willing to go along with Alvin Toffler's view in his book *Future Shock*, that in these fast changing times, "permanence has given place to transience". At least in the search for relevant higher education, evaluations and re-appraisals should have a more pronounced role and should be more frequently applied.

In developing countries great expectations have been placed upon the universities by society and by governmental agencies, especially if the universities are public universities with a high degree of commitment to national development. It is generally very difficult for universities to provide answers to "new questions and challenges" which have arisen within the last few decades. This is even more true for universities in the developing countries, due to the fact that these universities still have to develop and improve their capabilities in the basic traditional university functions, besides being asked to contribute tangibly to the solution of very difficult problems arising in the course of national planning and in the implementation of national development. On the other hand, in the developing countries, the traditional university functions like teaching, research, and service to the society are becoming more meaningful, in the sense that the universities are expected to become the breeding ground of future leaders and high-level manpower, and to be able to solve problems for the various sectors of national development. It is suggested that in the developing countries universities should be accepted as an integral part of development resources. These high ideals are of course easier said than accomplished, especially when it is expected that the university should be able to serve the needs of development by narrowing the gap between the generation and transfer of knowledge. In Indonesia, universities are expected to fulfil concurrently the three functions of higher learning, i.e. teaching, research, and service to society. I have to admit here that it is often very difficult for a university administrator to keep the golden balance among these three functions, especially where resources are not abundant.

Among all the constraints that have to be faced by universities in the developing countries, the limitation of qualified and experienced faculty and staff members is most critical, especially when the ultimate policy is self-sufficiency. With the increase of large development investment in the last five years, and indications that these investments will continue to grow in the years to come, Indonesia is facing the problem of shortage of university graduates in the fields of science and engineering. To solve this problem of shortage of qualified manpower, not only in the universities but also all over the country, there should be an adequate manpower development programme and manpower utilization policy. Efficient use of resources is necessary. To be able to implement this, there should be no barriers within the university itself, i.e. between faculties, departments, laboratories, and between universities, research institutions and industries. This implies that there should be an adequate organizational structure in the university. For this purpose, the Institut Teknologi Bandung has introduced the application of matrix organization for the university management, which makes a separation between the resource organization and the programme organization, and provides more possibilities for integrated planning.

The problem of relevance, effectiveness and efficiency in higher education is still of paramount importance. The great cost of higher education also presents a problem. And there are also real problems within society that have to be faced by the university graduates, e.g. work settings in different kinds of environment, the broad spectrum of technology from the backward indigenous to the most modern and advanced technology. The decision as to the kind of graduates that universities have to produce, i.e. a "tailor made finished product" or an "adaptable nearly finished product", becomes more urgent.

At the moment, it is difficult to make a valid evaluation of the effectiveness of higher education. Questionnaires which have been circulated on this matter do not give satisfactory results. This is due to the fact that the number of university graduates is still far below the needs and absorptive capacity of the consumers, so that society will absorb most of the university graduates, and retrain them where necessary for adaptation to specific jobs. Furthermore, some of the consumers are not yet in an established form, so that it will be erroneous to utilize them as bases for the measurement of effectiveness. All I can say is that universities are all trying very hard to respond to the challenges of the changing environment. The efficiency of the universities is in general very low. Dropout rates and the proportion of extended study beyond the nominal programme are very high. The quality of teaching will also influence the efficiency of the universities.

Experience in the developing countries shows that the choice of technology used in development is determinant and has very wide implications. There is also an awareness of the serious limitations in the competency of relevant government bodies and private entrepreneurs, due to the complexity of the problems involved. Consequently there are some groups of scientists and engineers, who regard these complexities as a challenges, as a huge body of unknown knowlege and as a science in itself, whose mastery will help to elevate the technological level of the society. This leads to a satisfaction in the pursuit of this "science", just the same as "to be on the leading edge of science". It is believed that universities in the developing countries should make a significant contribution in the choice of technology.

Although many universities in the developing countries still do not have an established tradition, a certain compartmentalization with all its rigidities does exist. Our own experience has shown that there is a need for long-term conditioning to produce interdisciplinary cooperation. A good way to achieve this is through the implementation of interdisciplinary research projects which are directly related to national development. In the Institut Teknologi Bandung, our experience in working with interdisciplinary research teams has led us to institutionalize these activities in the form of a Development Technology Centre. The focus of attention of this centre is the adaptation of technology within the spectrum of development needs, and includes linkage of macro planning and micro implementation; innovation and transfer of technology for development; skill level and entrepreneur development; linkage among input technology, entrepreneur, financial institutions, skill level, markets and government. Other interdisciplinary research projects which are being undertaken are the micro hydroelectric project, manufacturing projects, tidal engineering project for the reclamation of tidal areas for rice plantation, transportation studies, etc. Well coordinated cooperation between universities and national development agencies in the developing countries on the one hand, and counterpart universities from the developed countries on the other hand, has proved to be beneficial in studying the problems of "appropriate technology" on the new frontiers of knowledge.

The higher education system and its environment have undergone rapid changes. These changes have generated new challenges to and demands on higher education. Higher education should have an adequate organization to cope with these challenges and demands. Within the university a development board may be formed to translate the requirements of national development into programmes of action; there is a need to have national coordination mechanisms to coordinate development programmes conducted by the universities, e.g. consortia for programmes in specific disciplines, centres of excellence, etc.; regional projects may be conducted through regional institutions, e.g. RIHED, ASAIHL

Abdul Rahman bin Arshad

Common Characteristics

I intend to identify first of all some basic characteristics of Asean countries which may be typical too of other developing countries. Firstly, financial resources are scarce and their dispensation has to be carefully planned in order to obtain maximum benefit with minimum wastage. Secondly, higher education is more a privilege than a right, and success in higher education normally brings about a change in social status and life style, resulting in a distinct gap between those who have and those who do not have. Thirdly, resulting from the second characteristic above there seems to be an over emphasis on the importance of higher education resulting sometimes in a high financial allocation to it although the advantage will go to only a privileged few. In this connection, too, there is perhaps a need to ask the question as to which level of education needs the greatest priority of treatment. Primary education is for the masses, higher education is for the chosen few. Do we want to create an elitist society and face the problems of an illiterate mass in future, or do we want to have a widely educated society and therefore concentrate resources on the appropriate levels for the benefit of the majority? Fourthly, there is a need for very rapid economic, industrial and social development, and higher education must play its role towards the provision of personnel resources for this development. In this connection, it is perhaps appropriate to distinguish between the meaning of higher education to the government and to the governed.

Higher Education and National Development

There is a need for manpower, both skilled and semi-skilled, for economic and social development. Every level of education has a role to play to meet this requirement and it must not be assumed that this role can be met by higher education alone and that more funds should be directed towards more people getting more degrees. Manpower needs present a pyramidal structure with a wide base. At a time when everybody is aspiring to get degrees it is imperative that governments to make a bold decision calling for the enlargement of the diploma level intake to avoid the pyramid having an inverted shape.

In their efforts to achieve rapid economic and social development governments are faced with shortage of personnel and expertise. With the scarce resources which are available, one has to plan personnel output directly related to economic needs, and not just for the promotion of oneself to a higher status and better life. As such there must be specialization to meet the distinct disciplines of manpower needs. It may mean that universities have to sort out among themselves as to which one must play which aspect of the role, in their efforts to supply manpower needs, so as to avoid duplication resulting in unnecessary overproduction in one area and underproduction in another. This would result, of course, in staffing difficulties because even in the staffing position of higher education there can be a preponderance of supply in one field or discipline and a shortage in another. There must therefore be careful planning on staff development to specifically meet requirements and roles.

A big question higher education has to ask, particularly in the light of higher education being a privilege, is "who and what type of people must be trained"? If this problem is approached with the attitude of opening of doors only to those who have successfully achieved a uniform and established academic qualification, and if opportunities for education are not evenly and equally distributed, then those who will get into universities are those from privileged environments. This will mean the adding of privilege to the privileged and will never help the depressed and the disadvantaged. It will mean that those who have had proper opportunities for education will be assured of higher education, while those who have been hampered by depressed social and economic environments and have not been able to get opportunities for proper education will remain at that level, or perhaps become even more depressed. A system of such a nature will only crucify the poor and the disadvantaged. This will result in greater disparity and what can follow are greater economic, social and political problems.

Asean countries do not have a long tradition in higher education, and being countries that were once colonized we consciously and unconsciously have inherited the foreign standards of the "mother" countries. We pride ourselves on having internationally acceptable standards or even more. It makes one wonder sometimes whether we are more internationally conscious and less nationally conscious. It even makes one wonder, when we base our standards on "mother" countries, whether we are spiritually as independent as we are politically independent. One has to ask further whether our higher education is intended to solve an international problem or a national problem. If our need is for 1,000 and in strict adherence to our ideal standards we can produce only 100, how long then will we take to solve our national problem? I am not for a moment suggesting that the results we aim for should be at the expense of what must be a healthy standard, but I would like to think that the standard we should aim at should be a *functional standard*. Too low a standard adopted may not contribute any advantage to society and economy, but too high a standard, particularly one based on foreign requirements and international standing, will result in the stagnation of social and economic plans, as there will be no supply of the personnel needed for national development. This will result in universities being accused of being too much an ivory tower and too far removed from society and its needs. A situation like this can be unpleasant, especially if the university has to depend on government funds for its existence.

Conclusion

I have tried to point out some of the realities found in higher education in Asean countries today and simultaneously tried to give my own views on adaptations higher education has to make to suit national growth. I must admit that my approach has little focus on the teaching in universities, but as my job is more linked with educational planning I am looking at higher education from the view of its role in nation building, and from the angles of economic, social and political development.

Saneh Chamarik

From observations made in my 10 years of university teaching, I deplore the failure of higher education, because of the lack of innovation and flexibility to face the challenges of our time. In Thailand, there are many graduates who are irrelevant to our socio-economic needs. The effect of higher education has made things worse rather than better.

The problems of higher education cannot be left to the educators alone, but must be related to the system and its environment. The planning of higher education in Southeast Asia has usually been by the state, plans have been geared to the needs of the state. There is a danger of rigidity and inability to obtain a balance between autonomy and state control. In Southeast Asia universities can have a positive role if they are not state controlled but society controlled.

Referring to the keynote address, I would like to comment on enculturation. If enculturation means only the relevance of higher education to the existing values in society, then it could be harmful in terms of making institutions of higher education rigid. Enculturation should imply relevance to the dynamics of adjusting to change and progress.

"Adaptive" must be accompanied by "innovative". This could well entail an increase in student discontent, which is a reflection of the socio-economic crisis in a society. We are now facing an escalation of student activism and even cynicism coupled with the demand for change. Any possibility of reforming the higher education system must be closely related to the socio-political context. We must therefore make a sincere effort to be relevant to our society although we have to face severe socio-political constraints.

CHANGING PROFILES OF UNIVERSITY STUDENTS IN SOUTHEAST ASIA

Nuanpen Wichiarajote

WHAT ARE THE CHANGES IN STUDENT PROFILES? WHAT ARE THE INFLUENCES OF THESE CHANGES ON PATTERNS OF STUDENT DEVELOPMENT?

Prior to World War II, student populations in Southeast Asian universities were mainly from the elite class, and were quite limited in number. However, during the post-war period many countries in Southeast Asia have regained their independence. As a consequence, there has been an upsurge in education among the populations of these countries. This has brought a large section of the population into the secondary school system, and thereby quantitatively and qualitatively changed the characteristic background of the university students of this decade. At present, a fairly high proportion of university students come from middle class families. When compared with their parents, the majority of them have better education, and are in the formative age group receptive to the pervasive environmental changes and challenges. With regard to their residence, a large number of them have to stay in rented places away from their homes which are usually located in other provinces.

The foregoing factors create a wide gap between university students and their parents, and even between the students and society at large. Students in these circumstances are likely to react to environmental challenges and to become actively involved in the very processes of social-cultural and political changes of the country. In some countries, they have even emerged as a new leadership power effecting changes in many spheres of life and society. Through witnessing the social ills created by multiple forces including sometimes ineffective and corrupt social orders, the students have gradually formulated their own model of a new society, or even adopted the emerging socialistic model which purports to bring social justice into the traditional societies.

Considering the traditional cultural background of university students at the time they enter their universities, many changes in attitudes and world-views are likely to occur after they are absorbed into the academic atmosphere of the modern western world science, the twentieth century jumble of individualism and socialism, crude nationalism, and the conviction that all their problems result from the faults of colonialism and traditional society. As a consequence, the students experience value conflicts over and above those characteristic of adolescents. Their resulting emotional insecurity may be expressed in many ways, one of which is distrust of figures of authority, including their university teachers.

Indonesia is an example of a country with such a social background. Between 1920 and 1941, most of the students admitted to study in the colleges were Dutch and Eurasians. Only a small percentage of Indonesians were permitted, as a specially privileged group.

This could possibly be the origin of the attitudes which favour the pursuit of higher education in terms of a prestige. After independence every high school graduate wanted to pursue a university training. The tremendous growth of universities is partly the result of these attitudes.

Anwari Dilmy[1] reported that the change of nature and functions of the regional universities, from being a traditional education system similar to an extension of the high school, to being a centre for regional cuture, an agent of modernization, and an agent for resource development started in 1972. Then the universities' staff members came to play an active role in preparing the first Five-Year Regional Development Plan, and agricultural students in leading universities were seen working in the fields with the farmers to demonstrate improved methods of planting, etc.

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[1] Yip Yat Hoong, ed., *Roles of Universities in Local and Regional Development in Southeast Asia*, Singapore: RIHED, 1973.

This change of the role of the universities, together with the change of students' activities seems to indicate that higher education is not being regarded as a prestige achievement as before, but new attitudes in terms of social responsibility for community development have emerged.

With these new attitudes, aroused by the needs in the rural environment, the students' expectation of university education may also change. Lecturers may be asked to become more development-oriented and to impart the kind of knowledge which is more applicable to the real life problems of the region.

In Thailand, the same trends and changes of attitudes may be found.

Prizzia and Sinsawasdi[2] reported from their study that Thai students' emerging attitudes of social responsibility were principally shown in the form of participation in protesting demonstrations. They found positive relationships between a student's participation and:

1. a student's exposure to mass media (i.e. newspaper, television, and radio news broadcasts);
2. a student's exposure to Westernization (Peace Corps, Western teachers, study abroad);
3. a student's field of study (i.e. humanities, social science, etc.);
4. a student's attitude toward the government (negative attitude toward policy, leaders, characteristics, and political *status quo*); and
5. a student's exposure to urbanization (university, Bangkok, travel abroad, etc.).

It was concluded that the students had easy access to political information and commentary, and the environmental changes tended to shape their new attitudes.

Data collected by Fisher in Thailand, Indonesia, Ceylon, Burma and India revealed that one of the main causes of student unrest there was the scarcity of socially and economically rewarding opportunities for employment; poor prospects of employment following the degree contributed fundamentally to the insecurity of university students. But Prizzia and Sinsawasdi[3] did not find this cause to be strongly related to Thai student activism, although field of study, and increased enrollment were relevant contributing factors.

The influence of these factors on the pattern of student development has been to develop in the students a new sense of participation in political, social and economic development.

In the case of the Thai students, Wichit Srisa-an[4] reported that the students proposed to educate the people in democratic methods, after the establishment of Thailand's new government, through the success of students' political uprising. This extension of education through the students to the people will represent the best possible interpretation of the concept of university expansion in the service of national development.

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[2] Prizzia and Sinsawasdi, *Thailand: Student Activism and Political Change,* Bangkok: Allied Printers, 1974.

[3] *Ibid.*

[4] Amnuay Tapingkae, ed., *The Growth of Southeast Asian Universities: Expansion Versus Consolidation,* Singapore: RIHED, 1974.

LEARNING PRACTICES AND EXPERIENCES OF THE UNIVERSITY STUDENTS

The university is viewed by students in Southeast Asia as a place where they can obtain the passport necessary for entering into prestigeous occupations and high social circles. This expectation is reinforced when they experience the university educational programme which is usually not very relevant to life in the society surrounding the university. The general function of the university is found to be a mere transmission of knowledge, and in this academic context, the acquisition of knowledge becomes largely a mechanical and passive reception of information and loose bits of knowledge. It is almost totally devoid of any development of critical creative problem-solving abilities and the inquiring mind, not to mention the inculcation of wide interests and aptitudes, the appreciation of manual work, the instilling of love for community service and the development of integrity of character. At present, these shortcomings are being gradually remedied in many Southeast Asian universities partly as a response to the pressures generated by the organized bodies of students who are increasingly dissatisfied with both the nature of higher education imparted to them and the manner in which it is given. In this connection, the students themselves have not only been passively asking the universities to make higher education more relevant to the society, they also have taken positive measures in this direction. For instance, university students in Thailand have for sometime sponsored "community development camping programmes" during their long summer vacation. In these programmes, student volunteers go camping in the villages and initiate community development projects which may involve local villagers in development work.

Considering the tremendous demand for higher education coupled with the rapid population growth in Southeast Asia, the quality problems of the universities may not be adequately solved for many years to come, if the traditional ways are still relied on as the major approach to solve these problems. This is due to the fact that rapid expansion of institutions of higher learning has created shortages of qualified staff, books, equipment and even space. Amost all the universities which have accepted large numbers of students have had to increase teaching loads. However, these problems may be easier to cope with if the universities are willing to reconsider their basic assumptions and seek alternative approaches to these problems.

It seems to me that almost all universities in Southeast Asia have been established on the assumption that they would try to measure up to the western standard of higher education. To this end, curricular programmes in these universities have been designed with the western model in mind, as far as their resources would allow. Usually, however, only the outward forms of higher education have been successfully adopted, while the inward spirit in terms of the striving for intellectual standards of excellence and the maintaining and promoting of high professional standards have been either difficult to develop or have been overlooked.

Another assumption has been that through the establishment of universities, the requirements of high-level manpower for development would be automatically met. This assumption could be valid at most only quantitatively, and not qualitatively. In this respect, the universities may fail to meet both the western standards of higher education and the standards called for by the development programmes. In fact, the existing social-cultural conditions and the emerging environmental challenges seem to require a new concept of higher education and a new role for the university in terms of the functions of instructors and students.

Would it be more appropriate for the universities of Southeast Asia to re-design their curricula to fit the new roles that they have been so urgently called upon to play, that is, the roles of *Development Universities?* If this proposition were acceptable, then the learning practices and experiences of the university students would have to be re-oriented toward the development tasks of the communities in particular, and of the nations in general.

Illustrations of some of the problems in curriculum development of the recent past may be found in a RIHED publication,[5] and presumably describing the conditions existing at least five years ago.

WHAT ARE THE CHARACTERISTICS OF OPTIMAL STUDENT DEVELOPMENT IN MEETING THE ENVIRONMENTAL CHALLENGES?

In order to effectively and systematically identify the characteristics of optimal student development in meeting the environmental challenges, it is necessary to consider the salient dimensions of the environmental challenges and the past, and to analyze the present attempts of Asian universities to meet these challenges in the prevailing Asian context as already reviewed in the previous sections. Subsequent to the analytical review, a creative synthesis will be attempted for the formulation of the characteristics of the optimal student development. This conceptual framework designed for the formulation of optimal student development characteristics is presented in Figure 1.

A PROPOSED SYNTHETIC FORMULATION OF OPTIMAL MODEL

I would like to propose a synthetic formulation of optimal model.

First it should be specifically stated what abilities are demanded of students in terms of being partners in national development:

1. At societal level, there is need for an ability to learn to penetrate into the economic and social systems, and to perceive how the systems generate desirable or undesirable behaviours. The next ability needed in this connection is to be able to learn to find, through a systematic method, a better alternative system.
2. At organizational level, the same abilities are needed in a smaller scale to find a better alternative system in the student's more immediate environment, such as their own university.
3. At individual and group levels, students need to possess the ability to learn to investigate their own personal problems, such as personal conflicts, etc., and to learn to integrate their own personality, to be emotionally adjusted with themselves, and to be socially adjusted with others especially in group work.

In order to be able to fulfil all these requirements, students must be helped to develop the following qualities and characteristics:

1. Abilities: problem-solving, creativity, inquiry and research abilities.
2. Values and attitudes: self-discipline, social-discipline, democratic values, scientific attitudes, social ethics, social responsibility.
3. Motivation: achievement motive, self-generating, cognitive motivation, affiliation motive.
4. Skills: agricultural skills, agro-industrial skills, business skills, technological skills, etc.
5. Social relationship (personality): catalytic leadership, effectiveness, group dynamic effectiveness, social adaptability.

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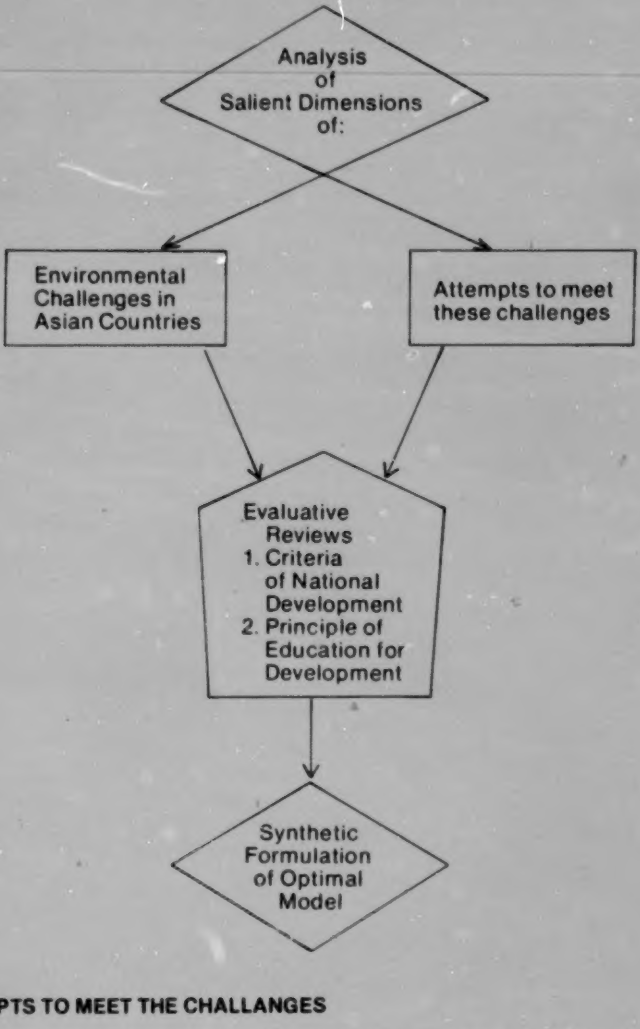
[5] Yip Yat Hoong, ed., *Development of Higher Education in Southeast Asia: Problems & Issues*, Singapore: RIHED, 1973.

FIGURE 1
A CONCEPTUAL FRAMEWORK FOR THE FORMATION OF CHARACTERISTICS OF OPTIMAL STUDENT DEVELOPMENT


Analysis of Salient Dimensions of:
Environmental Challenges in Asian Countries
Attempts to meet these challenges
Evaluative Reviews
1. Criteria of National Development
2. Principle of Education for Development
Synthetic Formulation of Optimal Model

ATTEMPTS TO MEET THE CHALLANGES

(How can Universities in Southeast Asia Channel Student Energies to Development?)

Within the last two decades, almost all Asian countries have made the assumption that education is a major key for national development and have gone ahead to quantitatively develop the required manpower through the existing traditional educational systems without adequately raising the question of the quality of education relevant to the national development goals, specifications and processes. The greater emphasis given to quantity rather than quality of higher education has proved to be an obstacle for the countries to achieve their long-range development goals. What are the long-range development goals of the Asian countries? Through which ways and means can these goals be effectively reached? And what roles can the universities play in this connection?

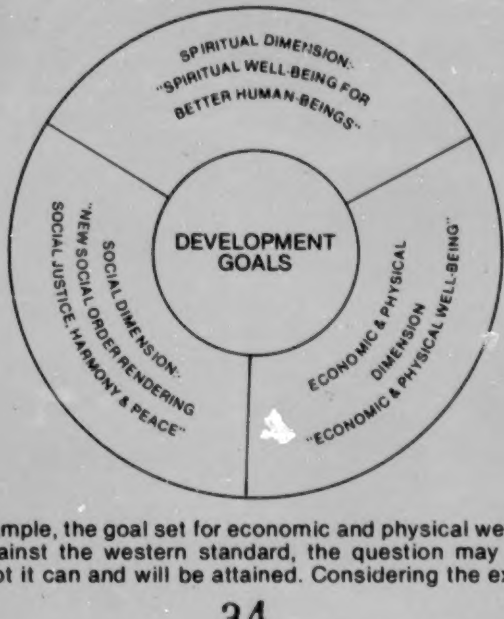
These questions may have to be primarily analyzed and adequately answered before alternative roles of Asian universities would be effectively proposed.

In my view, the long-range goals of most Asian countries may be categorized under three headings as follows:

1. Economic and Physical Dimension: All Southeast Asian countries are now striving for economic and physical well-being as measured against the western standard.
2. Social Dimension: All Asian countries are striving for a new order of society providing social justice, harmony and peace as measured against either their own socio-cultural standard, or against some models successfully implemented by other countries.
3. Spiritual Dimension: Some Asian countries have begun to realize the danger of over emphasis on materialistic development, and have tried to reformulate their development goals to include human development aspects in terms of spiritual well-being and the transformation of man to a higher stage of being.

These three dimensional goals may be graphically illustrated as in Figure 2.

FIGURE 2
THREE DIMENSIONAL DEVELOPMENT GOALS OF ASIAN COUNTRIES


SPIRITUAL DIMENSION:
"SPIRITUAL WELL-BEING FOR BETTER HUMAN-BEINGS"
DEVELOPMENT GOALS
SOCIAL DIMENSION:
"NEW SOCIAL ORDER RENDERING SOCIAL JUSTICE, HARMONY & PEACE"
ECONOMIC & PHYSICAL DIMENSION
"ECONOMIC & PHYSICAL WELL-BEING"

If, for example, the goal set for economic and physical well-being is to be measured against the western standard, the question may well be posed whether or not it can and will be attained. Considering the existing agrarian founded economy in most Southeast Asian countries, it is unlikely that the goal of western type economic and physical well-being, for the majority of the people, will be reached through industrialization alone. Would it be more logical to first concentrate on the rural economy with a salient emphasis on agricultural development? If this proposition is feasible, then we have to further consider alternative ways for achieving the goal of agricultural development. From experience, we have learned that making modern technology available to farmers has not been effective in solving the multi-facetted agrarian problems, such as lack of capital, too small farm size, or even the lack of motivation to work harder beyond the subsistence level. Viewed from the social science perspective, agricultural development seems to require a multi-disciplinary approach.

But where do we start? There seems to exist already a general technique which involves the application of social sciences to community development. This technique is an agricultural cooperative whereby political, economic, social, cultural and educational systems are brought to interact for maximum efficiency and effectiveness. In practice, the whole community is involved in the process of rural transformation. In this context of multi-disciplinary approach to community development, Southeast Asian universities may redefine their roles as catalytic agents for "independent" development of communities. If Southeast Asian universities were to accept these new roles then their student energies could be effectively channelled to development.

Now let us consider the possible catalytic roles of the universities in community development to discover exactly *how* to channel student energies to development. And let us do this by exploring five possible methods.

Exploration I. A Southeast Asian university may organize a community survey project involving both faculty members, students and villagers in field operational seminars. Through these projects, the faculty members and students would get to know the needs and problems of the community with respect to social-cultural, economic, political and technological conditions. And through the modality of field operational seminars, these needs and problems would be analyzed and conceptual solutions formulated within the framework of multi-disciplinary community development.

Exploration II. This is an exploration into the concept of multi-disciplinary community development. It is based on the postulate that innovative political-administrative, socio-economic and educational infrastructures must be concurrently constructed to serve as a viable foundation for "community independent development". It may be noted here that if a university is to really play the role of a catalytic agent, it must try to promote "independent development" in the community. In other words, self-reliance in terms of self-government, self-education, self-help and economic self-sufficiency should be promoted in the community.

But how could self-reliance be promoted in a broad community? To answer this question in a practical sense, a university may have to explore the following three interrelated projects:

1. Democratization Project for the promotion of self-government.
2. Farm Cooperatives Project for the promotion of self-help and economic self-sufficiency.
3. Community Education Project for the promotion of self-education or life-long education.

These three projects, in practice, would be integrated to form a Multi-disciplinary Community Independent Development Project.

Exploration III. This is an exploration into the concept of political socialization. It is based on the postulate that political-administrative infrastructure must be rectified to provide opportunity for the rural population to acquire the behavioural changes necessary for successful self-government.

The means to promote self-government is through the processes of political socialization, or, to be more accurate, the processes of political resocialization.

In order to effectively and efficiently help produce desirable behavioural changes for successful self-government in rural areas, a university in Southeast Asian countries may have to search for new goals and criteria to measure the behavioural outcomes of such goals. The goals and the criteria to be searched for in this project are in the social dimension of national goals.

In the striving for a new order of society among Southeast Asian countries, whether social justice, harmony and peace, (which could be the social dimension of national goals), are to be measured against their own socio-cultural standards, or against some models successfully implemented in other countries, is a serious question which calls for a decision to be made. Some university students seem to prefer the already successfully implemented models in other societies' socio-cultural context, no matter whether or not they are suitable to their own socio-cultural context, and whether or not they are congruent with the political ideology chosen by their country at present.

However, it is more likely that the silent majority of the people in Southeast Asian countries would prefer such social goals to be measured against their own traditional socio-cultural standard. How, then, can the standard for social justice, harmony and peace be reached in such a way that both the students and the majority of the people will come to some mutual agreement?

The solutions for this problem to be proposed by a university could possibly be:

1. to provide some means for the students and the rural people to work together in an existing socio-cultural context;
2. to explore those moral and ethical standards which are already deeply rooted and acceptable in the minds of the people either consciously or unconsciously; or
3. to seek standards which could be universally acceptable, on the basis that they can be proved to be universally valid.

Through which ways and means can these goals as measured against each country's own socio-cultural standards be effectively reached? And how can the universities succeed in channelling student energies to development? A short-range goal, and intermediate goals for a university should be established for these purposes. The following flow chart (Figure 3) illustrates the proposed goals to be considered by a university for rural transformation in terms of political resocialization.

FIGURE 3

Short-range Goal	Intermediate Goals		Long-range Goal
To produce work-oriented self-generating students who know how to solve political-administrative problems in a creative way	To produce a creative political administrative model for small scale experimentation	self-governing ability	National social goals to be achieved through the realization of democratic local government

In order that a university may fill the effective catalytic role in promoting behavioural changes for self-government among villagers, through a political resocialization project, a creative experimental model is needed for a plan of action to be made. The means to create an effective model, lies perhaps in the significant words "creative" and "problem-solving oriented".

Who is supposed to be creative and problem-solving oriented? Whose energies, power and potentiality are to be channelled for rural transformation and national development? The answer is the students, especially because of their present new sense of participation in political processes almost all over the world. Thus, the characteristics of optimal student development, previously mentioned are needed and can be developed through this kind of project. And it is the university staff's responsibility to help develop these characteristics, drawing up plans of action, and becoming involved in the political resocialization processes.

How can all these three goals be achieved in a short period? A political-administrative model must be created through a systematic problem-solving method. A model town is chosen, with the permission of the government and the town people, for the pilot project. Both instructors and students work together as *catalysts*, trying to help solve problems which occur in the process, replanning the model as appropriate, etc. By this means, the short-range, the intermediate and the long-range goals should be concurrently accomplished. The best way to produce problem-solving ability, in students as well as villagers, is to do it in field operational experimental research.

There will be two by-products which may also be achieved:

1. Not only villagers, but also instructors and students will be politically resocialized.
2. Students will become work-oriented and will see the opportunity to use their self-generating abilities in rural areas. This is comparable to an initiation ceremony in bringing students to rural areas.

In the long run, the method should help to solve the problem of educated unemployment!

Exploration IV. This an exploration into an economic efficiency project, in terms of two new concepts: a concept of "agricultural cooperative" and a concept of "economic resocialization". It is postulated that a new experimental agricultural cooperative model may be created for poor farmers who constitute about 80 per cent of the village population. The existing cooperative system practised in the villages is for the farmers who are already better off. It does not help to solve the problem of the slow growth of economy of the whole nation.

The new concept of economic resocialization is based on a postulate that innovative political-administrative and socio-economic infrastructures must be concurrently constructed to provide a viable foundation for the rural population to learn to acquire behavioural changes for "economic independent development", through the promotion of self-help and economic self-sufficiency.

The means which will assist such desirable behaviour to emerge is found in the new agricultural cooperative model, politically supported by a village council, and buttressed by the community education programmes.

In order that both behavioural changes may emerge, and the new model agricultural cooperative may function for the benefit of the poor farmers, there must be a committee of representatives from the agricultural cooperative attached to the village council. In other words, political-administrative and socio-economic infrastructures must be concurrently constructed.

How can resocialization and behavioural changes in terms of self-help and economic self-sufficiency be generated, when the poor farmers have been socialized to wait for help, to spend money uneconomically for immediate gratification, and to refuse to organize themselves in any form of cooperative which could be economically "independent"? The source of all these unproductive behaviours patterns seems to be greed, selfishness, a lack of delayed gratification, or a lack of contentment. In order that these sources of undesirable behaviour can be reduced so that the poor farmers can better utilize their potential, there must be some built-in conditions in the new agricultural cooperative model which will provide for the establishment of a moral foundation for the new economic resocialization.

The two leading economic models of the world: capitalism and socialism are not designed to reduce selfishness, etc., because the two models are not integrated with fundamental moral development. Both economic models generate some kind of system which may help to keep selfishness under control, but does not have the effect of reducing it. Whenever and wherever such systems give way, selfishness will be out of control, and there will be psychological disturbances, social disorders, social injustice, etc., that will eventually disrupt the social structure, if no creative measures are taken to rectify the situation.

Recognizing that the disproportionate emphasis placed on the promotion of economic well-being can be detrimental to the moral foundation of a society, the new model agricultural cooperative must include an integration of moral and spiritual development to make possible a balanced development of mind and matter. The flow chart formulated along this line of thought will be the same as that shown in Figure 3.

Exploration V. This is an exploration into a community education project. It is based on the postulate that innovative educational infrastructure must be constructed concurrently with the political-administrative and socio-economic infrastructures. In short, this implies that a village education committee must be attached to a village council, and at the same time to a community education centre which is responsible for the multifarious tasks shown in Figure 4, which shows the eight main "tasks" or programmes.

The basic assumption underlying the proposal in Figure 4 is that all the political-administrative, economic, and educational infrastructures are equally significant to the independent development of the community. However, in practice, there will be different emphasis and different allocations of budget to each heading in different periods. This means that priorities must be set for development in the following order:

First period: a rectification and consolidation of political-administrative infrastructure, followed by economic development.

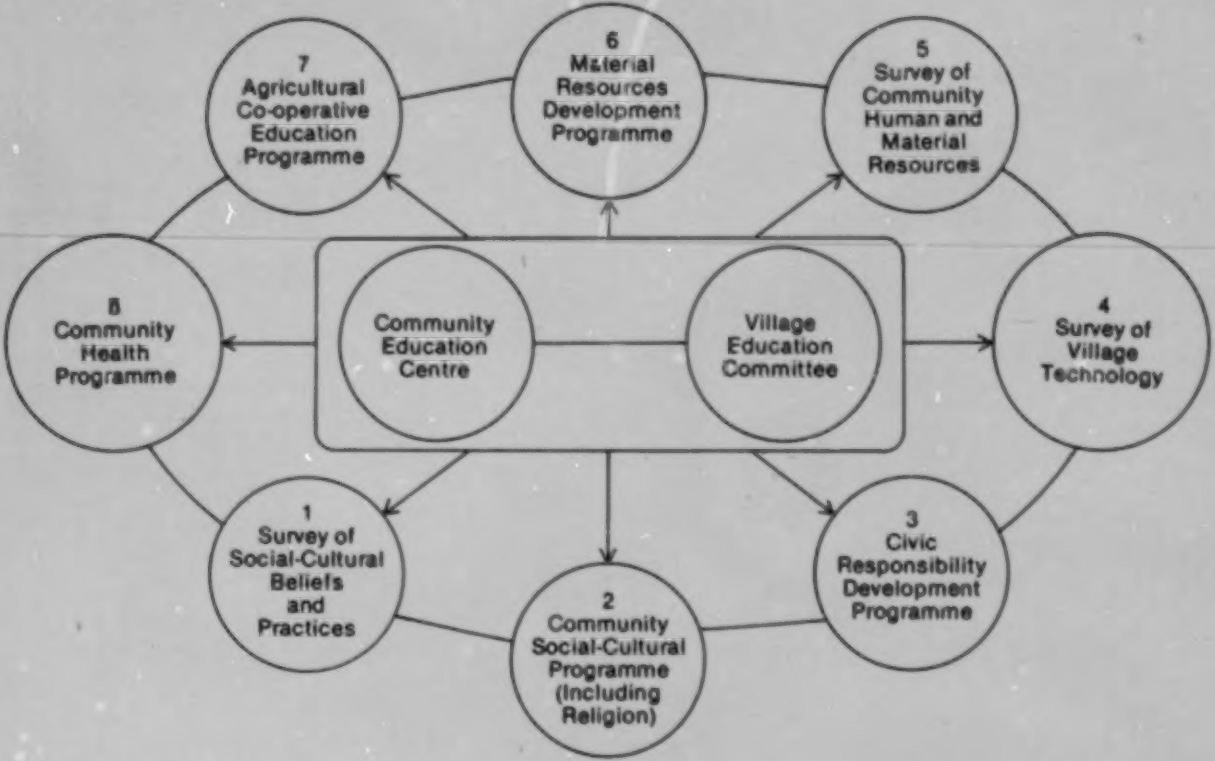
Second period: an emphasis on economic development, followed by education because, after starting economic development above the ground, it cannot be developed further without more education.

Third period: an emphasis on education and economic development on an equal basis.

Fourth period: an emphasis on education more than economic development for further promotion of the spiritual goal or "life development".

This pattern have to be explored by a university, in order to make an effective plan of work in terms of curriculum changes to be made in the university for rural transformation in the immediate future, and for community development, including urban areas in the future. The following tasks are in the purview of the university role of catalytic agents.

FIGURE 4
COMMUNITY EDUCATION


7 Agricultural Co-operative Education Programme
6 Material Resources Development Programme
5 Survey of Community Human and Material Resources
8 Community Health Programme
Community Education Centre
Village Education Committee
4 Survey of Village Technology
1 Survey of Social-Cultural Beliefs and Practices
2 Community Social-Cultural Programme (Including Religion)
3 Civic Responsibility Development Programme

A village education committee attached to a village council, is the administer-organizer of the programmes of work to be operated in the community education centre. The committee is composed of villagers, appointed by village council members who are elected by the whole village population. University instructors and students will be their academic consultants.

The community education centre is a centrally located place such as the existing village school where community educational programmes can be arranged and offered to the villagers. At this centre, local resources in terms of local expertise and materials available in the community will be fully utilized for the implementation of the educational programmes. Basically, the qualified villagers will be encouraged to take charge of the courses, while university teachers and students serve as catalytic agents or consultants.

1. A survey of social-cultural beliefs and practices is to be made for two main purposes. One is to preserve the villagers cultural heritage. The other is to seek for the social-cultural aspects which are conducive to Araya democratic resocialization. The data collected are about the norms, values, beliefs and social structures which are reflected in traditional behaviour relating to the villagers needs in respect of a political-administrative system.
2. A community social-cultural programme, based on the survey from 1, is to be presented to villagers periodically, or programmed simultaneously with the ongoing social-cultural events of the village. Religious programme is one example. It is to be presented in a meaningful way to help to illustrate "Araya Democracy".
3. Civic Responsibility Development Programme, should be a continuous process, enriched by 1 and 2.
4. A survey of village technology is to be studied not only in terms of economic purposes, but also in terms of sociological and anthropological background associated with technology. Then these findings will be compared with the modern technology whereby the technological gaps will be identified and programmes of technological education designed to fill the gaps. And based on the existing social-cultural practices, certain necessary modern values and social-cultural practices will be introduced to the villagers.
5. A survey is made of community human and material resources the results of which are to be integrated with the material resource development programme.
6. Knowlege which is accumulated in the form of research and practice in a university, especially a university of agriculture, should be integrated into this programme.
7. Agricultural cooperative education programme. 4, 5, and 6 will be enriching to this programme.
8. Community health programme is the last but not the least in its importance because all other work will be useless if this programme fails. No villagers will perform any task well if their health is poor. Preventive education for health improvement is the best policy. This kind of programme must be incorporated into agricultural cooperatives wherever possible.

To conclude, all the five explorations represent catalytic roles which the universities can play in rural transformation, and through which student energies may be channelled. All kinds of resources in the university, will thus be mobilized for national and local development. If these proposals are accepted, the undertaking of the work will cause the university to be directly involved in actual national and local development, instead of having merely a remote involvement and drawing up national plans without having real and close contact with the implementation of those plans. There will be no more complaints that the governments are not making use of research and university personnel. If a university is successful in these five explorations, it also means that it will be successful in solving the problems of its graduates' unemployment, and as a result, it will also help to speed up the growth of the national economy and encourage social development both of which are the major problems of all Southeast Asian countries at the moment.

WHAT CHANGES ARE NEEDED IN TEACHING-LEARNING PROCESSES AND IN UNIVERSITY ORGANIZATION TO FACILITATE OPTIMAL STUDENT DEVELOPMENT?

Education for development means taking account of local conditions and local people through systematic action to change these conditions, and assisting the local people in the resocialization processes to enable them to operate in their new roles. University education must become less traditional and less formal. This means that some changes are needed in teaching-learning processes which involve changes in the curriculum as well as changes in university organization.

Curriculum Changes Including Teaching-Learning Processes

A university's catalytic role in community development (or national development), can be exemplified in terms of three interdisciplinary projects, namely: Araya Democratic socialization (in a broader sense this is political reorganization), community education, and agricultural cooperatives. Both the nature of the catalytic role and the interdisciplinary approach have their implications for curriculum changes for a university as will be itemized under the five categories of curriculum processes shown in Figure 5.

1. *Educational Objectives* — characters to be developed in the students
   - Abilities: problem-solving, creativity, inquiry, research.
   - Values and Attitudes: self-discipline, social-discipline, democratic values, scientific attitudes, social ethics, social responsibility.
   - Motivation: achievement motive, self-generating, cognitive motivation, affiliation motive.
   - Skills: agricultural skills, agro-industrial skills, business skills, technological skills, etc.
   - Social Relationship (personality): catalytic leadership effectiveness, group dynamic effectiveness, social adaptability.
2. *Curriculum Contents*

A curriculum for development means that the content to be included in each subject area must be selected, for it is not possible to include everything. When there are many items which appear relevant, we must make a decision by setting priorities. To make a decision on a firm basis, data should be collected in a survey of students behaviour, for example, about their belief and attitudes regarding specific needs related to national development. Then, the students' behaviour corresponding to such specific needs are to be compared with the behaviour stated in the objectives. The larger the discrepancy is between the actual and the expected belief, the higher the level of priority it has. As a rule, the curriculum contents may be derived from the educational objectives by posing the question: In order to achieve this set of objectives, what content and method of teaching should be used?

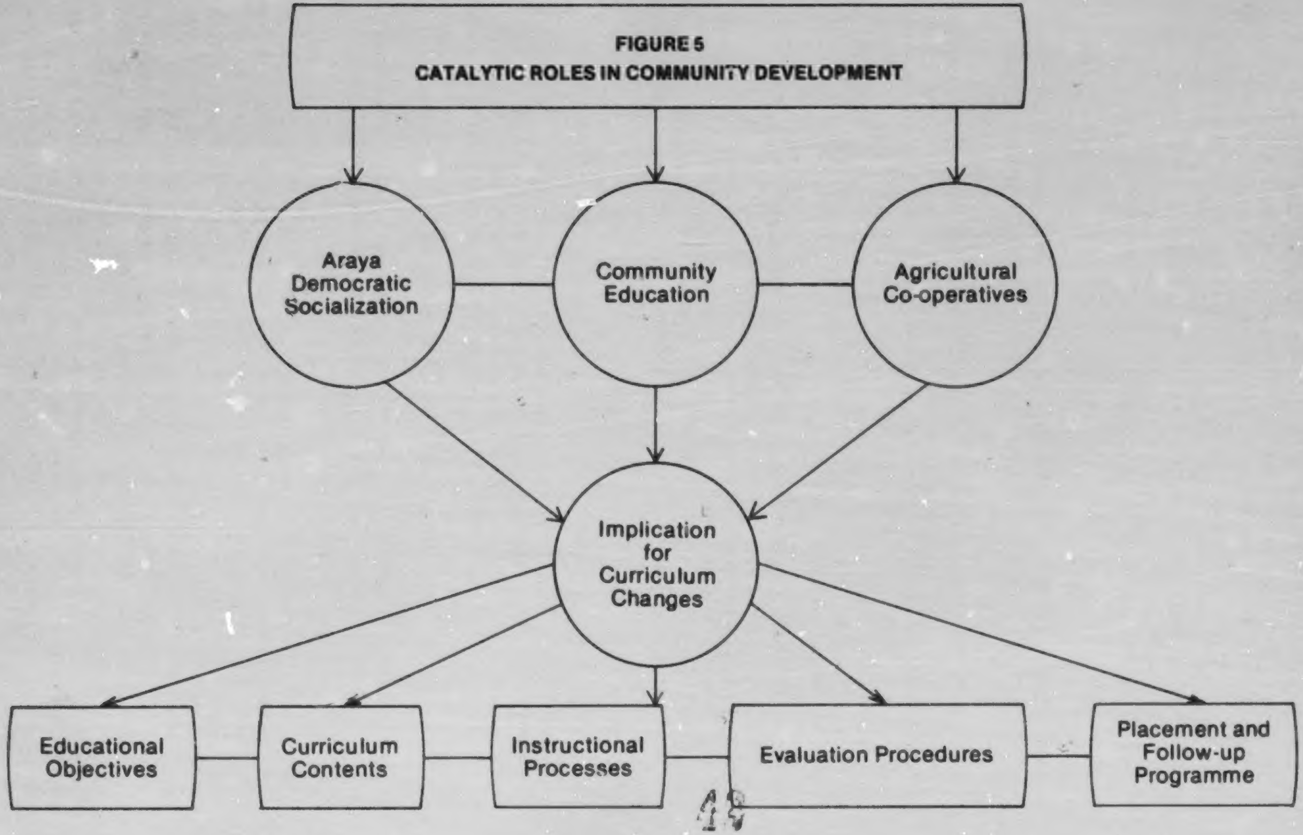


FIGURE 5
CATALYTIC ROLES IN COMMUNITY DEVELOPMENT

Araya Democratic Socialization
Community Education
Agricultural Co-operatives
Implication for Curriculum Changes
Educational Objectives
Curriculum Contents
Instructional Processes
Evaluation Procedures
Placement and Follow-up Programme

3. *Instructional Processes*

A curriculum for development also means that we must choose the methods we shall use to produce the attitudes, values and beliefs we want. In this case, the OEPC[6] inquiry training, systematic problem-solving, brainstorming technique, group dynamics and sensitivity training, etc. will be used to stimulate the desired behaviour.

One way to generate problem-solving ability may be to use co-curricular activities. Instructors may either provide physical and social problems on campus, or may ask students to observe and propose problems which are related to the course content. Then the students will discuss outside class (after they are already trained to solve problems through discussion). The solutions will be proposed to instructors who will select the best solution to be publicly announced or published in a university newspaper. The problems may range from a simple problem such as how to grow trees on campus, to a large scale problem such as show to develop the entire campus. A variety of specific projects on a smaller scale should be developed (before taking the further step to rural development). The faculty question will be: What knowledge and skill about campus development will be taught, and in which subject areas?

The above suggestion is based on the assumption that in a curriculum for development, the function of a university is more of a service and less of an instructional programme for the sake of pure knowledge. Any project must be recognized as an experiment through which both instructors and students will learn what kind of approach will work in a real situation, in order that their objectives will be accomplished.

4. *Evaluation Procedures*

What behaviour do we expect in the students and the instructors demonstrating that they have achieved the objectives? These expectations will have to be written in specific behavioural objectives and the criteria to measure the behavioural outcomes have to be established. The effectiveness of curriculum materials in aiding the lecturers and students to realize the educational objectives should also be evaluated. The most crucial evaluation is the performance in the village projects.

The educational implications of a curriculum for development means that education may be less formal. Measuring instruments must be newly devised. Students performance cannot be evaluated successfully from rigid examinations. Evaluation of practicum in community development should be systematically studied and the best method found should be faithfully implemented.

5. *Placement and Follow-up Programme*

It should be noted that university graduates who become government civil servants are not called upon to help draw up national development plans, etc. This is a wastage of manpower. Now that the students are trained in experimental projects for rural transformation, they should be able to help villagers draw up rural development plans and implement them. And they may go to work with villagers, instead of becoming civil servants. Placement and follow-up programmes are very important in both cases. Screening, placement, and periodical follow-up with some measuring instruments are needed for further evaluation for the effective development and utilization of manpower.

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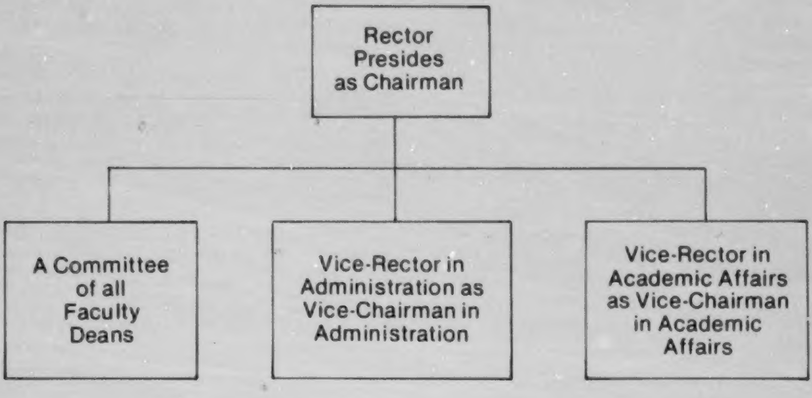
[6] O = Observation; E = Explanation; P = Prediction; C = Control and Creativity

What Changes are Needed in University Organization?

One of the educational implications of a broader concept of development is that university education must be freed from system restrictions. A university may set up a project called: Administration and Promotion of Education, Political-Administration Economics and may mobilize all manpower from all faculty members to cooperate in the proposed five explorations through a new line of social development work or a new span of control, as shown in the following organizational chart.


Rector Presides as Chairman
A Committee of all Faculty Deans
Vice-Rector in Administration as Vice-Chairman in Administration
Vice-Rector in Academic Affairs as Vice-Chairman in Academic Affairs

Political-Administration, Economic and Social Development Project.

This governing board is established for the following purposes:

1. To seek for cooperation,
    - between the university administrative personnel and the instructors,
    - between instructors and instructors,
    - between instructors and students,
    - among students.
2. To help all these to adapt themselves for the benefit of the whole nation.
3. To seek together for some means to solve community problems through a multi-disciplinary approach.
4. To perform the service function for national development.
5. To solve conflicts between instructors and students.
6. To promote modern methods of teaching.
7. To train students to solve problems instantly and correctly.
8. To promote unity, harmony and peace within the university and in the whole society.

Functions

1. The vice-chairman in academic affairs will evaluate each instructor's teaching in each faculty, through students' evaluation.
2. The vice-chairman in administration will evaluate administration, interpersonal relationship between administrators and instructors, among instructors, between instructors and students, and among students, in order to improve cooperation.

3. The committee of the deans of all faculty will meet at least once a month to acknowledge, to correct, to improve teaching-learning processes according to the set objectives.
4. Instructors should fill the following functions:
Provide problems to be solved by students through group discussion;
Follow up and select the best solutions and announce them publically or put them into use;
Establish division of labour among instructors
— secretariat
— coordinator
— researcher or study group;

Work together to establish programme or teaching modules through a multi-disciplinary approach, accepting that education, economic and social affairs, and political-administration are sequential in cause and effect;

Be aware, in evaluating any development programme of the intermeshing relationship of political, economic and educational factors interacting in a cause-and-effect sequence. For example, the introduction of a newly rectified political-administrative system may stimulate a mild economic spurt which, after a while, may become stagnant again. Then more education would have to be injected in order to further stimulate economic growth;

Establish a variety of projects to solve problems in political-administrative, economic social affairs, and education.

Expected Outcome

1. Academic atmosphere will prevail in the university among instructors and students.
2. The use of manpower in the university for the benefit of the country will be effective because the students have done some study or experiment in real situations and have gained confidence in their method of working, and they have been able to identify development tasks in specific situations.

In order to promote the idea of regional cooperation, I would like to propose that Southeast Asian universities form a consortium to plan, implement and evaluate this Project together.

DISCUSSIONS

A. Amiruddin

I would like to comment on the statement that universities tend to teach the elite group of a society. I am of the opinion that this will not happen if proper care is taken to give opportunities to the lower class of society to enrol into the universities. Due to the increasing number of young people aspiring to higher education, there is a tendency among universities to introduce entrance examinations. There is an inherent danger in this policy; if the entrance examinations fail to measure the potentialities of the students, and only measure the background experiences of the students, the bias would be towards a certain group of society — the privileged.

There seems to be a change in the expectation of students as to what the reward of their studies will be. They tend to prefer jobs with better economic rewards rather than jobs with less material rewards. These tendencies have resulted in a very unfortunate situation, with less and less students enrolling in pure sciences and humanities. There is an inherent danger if this situation is not properly controlled. How can universities supply the necessary high-level manpower needed in these fields? If universities cannot produce enough of the scientists needed for the development of the country, we may end up as importers of technology, unable to generate indigenous technology for our own development. And, how can we enculture scientific and technological development, as put forward by Professor Makagiansar in his keynote address, if we do not have enough well-trained people in humanities?

I am interested in the concept of catalytical role of the university in the development of the rural community discussed by Dr. Nuanpen. Since 1974 in Indonesia we have introduced an intra-curricular student community service programme, "Kuliah Kerja Nyata". Students are required to spend six months in the villages to experience village problems and help the people in the rural areas. The students are required to report back to the university about relevant problems that are prevalent in the rural areas. By this approach, it is anticipated that the students will get to know the problems they will face after graduation. It is also hoped that the feedback to the universities from this programme will bring improvement to the curriculum, in making it more relevant to the needs of the society. I agree with Dr. Nuanpen that this approach may help in solving the problem of educated employment.

We are here discussing the optimization of teaching-learning processes. No matter how well we formulate possible solutions to the problem, the implementation of these is much in doubt, if no steps are taken to improve the attitude of university teachers. As stated by Dr. Mahathir Mohamad, the Minister of Education of Malaysia, in his opening address this morning, university teachers need preparation before they are allowed to teach. In practice, however, all that is required of them before they begin to teach in universities is a university degree. No wonder many university teachers do not have the right attitude to carry out their duties. University teachers tend to be more conservative in adopting changes. The successes of innovation is dependent on the staff, and it is necessary that they should have the right attitude towards adopting these changes. Furthermore, their actions are influential in changing the attitudes of the students. Perhaps, to search for solutions of this problem, we need to look at the recruitment process by which we engage university teachers.

Seah Chee Meow

Universities in Southeast Asia are largely post-war establishments. The proliferation of universities and similar institutions has become even more obvious upon each country's attainment of political independence. In part, this desire to increase the number of such institutions (and in turn, an expansion in student enrolment) reflects a mixture of hope and considered evaluation. Among those arguments which may be highlighted are the following:

1. That such institutions can greatly assist the country's social, economic and national development;
2. That expansion in university enrolment and the number of such institutions will have a egalitarian effect and will favour social justice;
3. That students will necessarily acquire leadership qualities.

The emphasis on education as an integral part of any government's programme, and the increasing level of literacy, will also lead to an increase either in the number of universities or the size of the university student population in Southeast Asian countries.

This is likely to develop a less elitist outlook among the student population. This process may be facilitated by other variables such as the types of policies adopted by the political leadership and educationists (whether for example, educational opportunities are made available for all sectors of the population). Popular pressure will tend to lead to a more heterogenous student body at the university level. It is also likely that an enlarged student enrolment by itself will lead to an acceleration in the pace of social justice and equality, since opportunities to acquire higher education are spread out to include a larger number. It is possible therefore that present and incoming student populations will stress areas of social responsibility to include community development projects primarily because of their earlier period of exposure to less fortunate circumstances.

The purpose of higher education both from the government's viewpoint as well as the viewpoint of the students themselves is important in affecting student profile. In South Vietnam, prior to the change of regime, universities and colleges were sanctuaries wherein students could avoid being conscripted into military service. The result was the large number of students in the universities, notably in the humanities and social sciences, where the admission criteria were less rigorous. Similarly, such students sought to prolong their stay in these institutions. In such instances, there was what might be regarded as goal-displacement as far as the purpose of higher education was concerned. Similarly, it is necessary to evaluate the premises of a government's educational policy(ies) as these could affect the relations between the universities and the government (particularly over questions of finance and curricula) and between governments and students.

Together with expansion of educational opportunities, it can be expected that universities will see a larger female student population. It may well be correct to say that the relative increase of female student population may even be higher than that of the overall student population. The effects of this feature will be an interesting subject of inquiry, but suffice it to say, this feature will have more than just a casual effect on overall social change.

The attitudes of students towards learning and the learning process will also influence responses to environmental challenges. Education in many countries is regarded as a social and economic investment, and this attitude may be even more so in the case of individual families and certain disciplines. It is likely that a purely functional (or parochial) attitude towards education could lead to book-swotting or rote-learning and a corresponding de-emphasis on non-quantifiable though important aspects of higher education, such as social leadership. This is not to say that this attitude is true only of countries which do not have problems of graduate unemployment. After all, despite proliferation in the number of institutions of higher learning, the university students still constitute a small percentage of the population.

The time-lag between policy formulation and implementation (and also, between implementation and effects of implementation) should also be noted. For example, a change in curriculum may take up to six or more years before the results of such changes are evident. In this sense, university administrators and educators have more than just a moral obligation to continuously appraise the roles and purpose of education, as their policies could affect student profiles. Should education be vocational or should it stress merely the importance of training an inquiring mind? What compromises or formulae should be adopted? What approaches have been made in studies to make available what Michael McDaniel called "tomorrow's curriculum today"? What strategy-mix should be adopted in educational futurism with regard to perspective and discipline?

Mohd. Rashdan Haji Baba

I would like to focus discussion of the topic against a Malaysian setting.

The student profile in the Malaysian scene in universities and other institutions of higher learning will have to be viewed against a background of rapid developmental changes within the country, and around the country in the region and elsewhere. These factors either individually or in combination, have contributed towards the rather widespread campus unrest which has caught the country from time to time and reached its peak in December 1974.

Rapid Growth of Student Population

Before 1969 Malaysia had only one university with a population of less than 8,000. Since 1969, however, the number of universities has grown to five, while at the same time other institutions of tertiary education have also been established. Consequently student numbers have grown at a very rapid rate as shown below:

Year	Total
1970/71	9,758
1971/72	11,414
1972/73	13,385
1973/74	14,335
1974/75	15,944
1975/76	17,477

Location of Universities and Other Institutions

Of the five universities, only one is located away from the Federal Capital. The other four universities together with other institutions for tertiary education bring within a radius of less than 25 miles a heavy concentration of students. With ease of transport and excellent communication facilities the different groups are easily accessible to one another. This enables the different student bodies to coordinate their activities or mount concerted efforts on anything they propose to embark upon with relative ease.

The Changing Structure of Student Population vis-a-vis Ethnic Groupings

The establishment of more institutions of higher learning, coupled with the need to implement certain national policies, has resulted in the ethnic groups of the country being now more realistically represented in the universities compared to the period before 1970. Today there is a high proportion of rural youth gaining admission into universities and other institutions. They come from a social background and environment very different from that of the campuses and their surroundings. They also bring with them value systems, a code of ethics, and moral standards which need not necessarily be in consonance with those generally prevailing in the urban society.

The Success Stories of Development and Student Activities in Neighbouring Countries

In no small measure, the success of the Indonesian and Thai student revolutions had encouraged students in Malaysia to embark upon programmes which they thought would bring about changes in Government as well as society.

One of the attendant effects of development is its tendency to exaggerate differences between ethnic groups. As a nation develops, opportunities for participation in its economy and politics, disparities in power, wealth, mobility and cosmopolitanism may create disparities within a community. In an eariler and more restrictive period, internal differences were overshadowed by common experiences of discrimination or exclusion. The students seem to realize that with accelerated development, some members tend to break away from their original grouping. It is at this phase that communal elites are prone to lose credibility in the eyes of their own ethnic constituents. As students reject their own elites, they simultaneously become more hostile toward members of their community in general.

Education System

Student ideology in this area is bound to be ambivalent. Young people come to the universities with great expectations — expectations that are not purely educational but related to what they expect to be a culturally (and socially) liberating experiences.

The emphasis on academic excellence, based on an examination at the end of the year, for upward mobility has also contributed largely towards student activism. Only lately have two other universities changed to the semester system as used by Universiti Pertanian Malaysia. But the remaining universities adhere to the old system which requires the student to take an annual examination with very few or no tests at all before that, and leaves the student with a relatively easy load through the major part of the year. With so much time on their hands, students under this system intensified their demand for participation in the making of decisions affecting them. These consultations may have had the positive effect of helping to modernize educational methods. They can also and did sometimes lead to undesirable or embarrassing changes if they are geared too narrowly to student "ideology of relevance".

Examinations are also something that students dislike. With the end-of-year examinations coming up, the students feel the pressure building up in them. Student-leaders feel these pressures much more, since they have involved themselves very heavily in student activities and thus are less prepared for the examinations. To a considerable extent, provocative issues were often raised at such times to capture the attention of students, and campus order and peace became prey to these ill-prepared student-leaders and their supporters who were also unprepared for the coming examinations. Anything done to postpone, delay or even disrupt the examinations would provide them with an extra lease of life on campus, and this kind of movement invariably received popular support.

Faculty Involvement

The relatively young faculty members of Malaysian universities and the greater tendency for them to join students in putting forward their demands has tended to encourage the students more in pursuing disrupting activities.

Bursaries and Scholarships

Another feature of the Malaysian scene in respect of university students is that a high proportion of them see their way through tertiary education on public funds, either by way of bursaries or scholarships, or paying fees at heavily subsidized rates. This has the tendency to create among them a feeling of gratitude and a sense of obligation to the tax-payers and the public in general, and hence the need to feel socially and personally useful and relevant. They subsequently develop a sensitivity to respond to the needs of the neglected groups, and consequently proclaim themselves as guardians of the people's welfare, particularly when it appears to them that the impact of modern science and technology has not been equitably distributed among the populace.

Special Educational Programmes

In an effort to correct the imbalance of student ratio in respect of ethnic groups, and in an attempt to pursue the New Economic Policy of the Government, several universities in the country have instituted special educational programmes for the disadvantaged group. This in itself has brought about a feeling of discontent into campuses in Malaysia, both in the group that has been provided for and in the group that has not benefited from the special programmes. This has generated a certain kind of feeling amongst members in the respective groups and oftentimes such feelings have erupted into violence causing serious dislocation of life on campuses.

Restrictive Legislation

The widespread disruption to life on the nation's campuses has led to public anger and resulted in restrictive legislation being passed on student activities and greater public participation in the affairs of the universities. The membership of the policy-making Council of these institutions is now in the main made up of officers of the public services. Consequently it is envisaged that student activism in universities will have to maintain a low profile in future.

A CRITICAL ASSESSMENT OF UNIVERSITY TEACHING

Hulman Sinaga

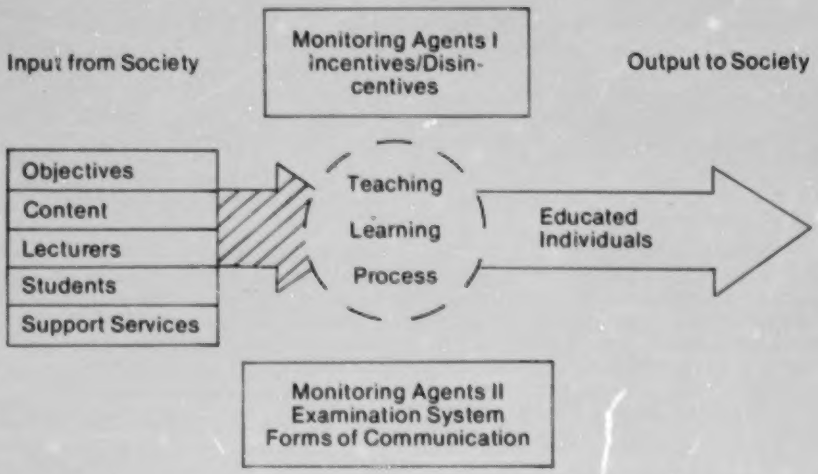
INTRODUCTION

Any university — a complex and unique system — is operated to attain some set of objectives. To do this certain "mechanisms" are designed to achieve selected objectives of the set. Each of the mechanisms can be conceptually considered as a system, i.e. an entity composed of a number of parts, which stand in some reasonably defined relationship to one another.[1]

One such system is that of teaching. It is designed to bring about certain learning outcomes. In common with other productive systems, university teaching can be said to have a set of inputs, which are subject to a process, designed to attain certain outputs which in turn are intended to satisfy certain objectives of the complex university system (Figure 1).

FIGURE 1

THE MAJOR COMPONENTS OF THE UNIVERSITY TEACHING SYSTEM


Input from Society
Monitoring Agents I incentives/Disincentives
Output to Society
Objectives
Content
Lecturers
Students
Support Services
Teaching
Learning
Process
Educated Individuals
Monitoring Agents II
Examination System
Forms of Communication

The inputs of this system include: students with their increasingly varied and complex backgrounds, lecturers with their varying degree of preparation for teaching, objectives which the teaching-learning system has been particularly intended to achieve, content representing a multiplicity of methods of study and conceptualization, and the support services required for teaching. Strongly influencing the input factors as they interact within the system are factors which I shall call monitoring agents. These by and large determine the quality of the output (graduates) to society. The monitoring agents include factors such as the examination system, the form in which communication is to flow, and the incentives or disincentives for commitment to teaching. Clearly, if we are to assess the health of the system of university teaching in order to improve its performance and to plan its future intelligently, we must examine the relationships among the critical components of the system in a unified vision.

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[1] G.L. Immegart and F.J. Pilecki, *An Introduction to Systems for the Educational Administrator*, Reading, Massachusetts: Addison-Wesley Publishing Company, 1973.

THE SCOPE OF THE PAPER

While the title of this paper indicates that this is to be an assessment of university teaching, its real scope is much more modest. The rigorous assessment of the whole system of university teaching in this region would be a major and complex undertaking. Thus for a paper of this scope one has to be content with an exploratory analysis of certain aspects of the system.

In other words, rather than provide an assessment of university teaching, an attempt is made to introduce the reader to its real nature. This is done by highlighting certain features of this system. Specifically, we shall focus on the following: the meaning of the term teaching, the forms in which communication is to flow, the kinds of objectives best achieved by the various forms of communication, the examination as a monitoring agent, the incentives or disincentives for commitment to teaching and, finally, the preparation of lecturers for teaching in a universtiy.

What is "Teaching"?

What is generally meant by the term "teaching"? Gage[2] has pointed out that "teaching" is a misleading generic term which simply covers too much. He goes on to say that it falsely suggest a single, unitary phenomenon that can fruitfully be made the subject of theory development.

Let us look at some attempts to define the term. Mower,[3] the psychologist, has given us a definition proposed by one of his students:

> Teaching is a process whereby one individual enables another to learn something more quickly than he would on the basis of his own trial and error.

The above definition is tantalizing in its brevity and simplicity. It, however, poses some problems. If teaching is a catalytic agent for learning, i.e. an agent for accelerating the process of learning, what do we call those segments of the process when learning actually slows down? Have we not all experienced the class session when we were so confused about what was being taught that learning actually decelerated? While teaching cannot be dissociated from learning, it must be recognized that learning can take place in the absence of, and even, in spite of, teaching.

For another statement on the matter we quote Laing[4] who says:

> Teaching involves a diversity of activities — exposition, narration, argument, demonstration, planning learning experiences that will enable the student to master the methods of thinking appropriate to one's subject, planning curricula, planning assignments, evaluating and testing to see whether the desired learning has taken place — to mention only a few.

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[2] N.L. Gage, "Toward a Cognitive Theory of Teaching", in *Teachers College Record*, (February 1964), 65(5): 408.

[3] Quoted by A. Laing in his paper entitled "What is the Lecture Best For"?, *Introductory Teaching Course Handbook*, Section B, The University of Leeds, 1974.

[4] *Ibid.*

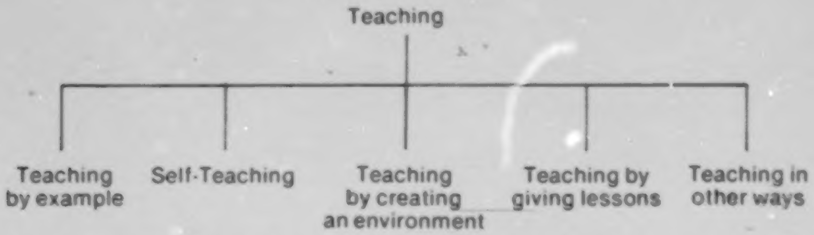
Laing has given a rather comprehensive description of what is involved in teaching. While he has pointed to the complexity of the teaching act, he has not defined the term. I cannot help but concur with Gage when he points out: "Teaching is a misleading generic term that simply covers too much". Hence we are forced to look elsewhere for another definition. John Herbert[5] puts it this way.

> "Teaching is understood to be a species of action: its end is to effect in the behaviour of particular persons changes which a given social group or sub-group regards as possible and desirable; its means are "ways of teaching".

Herbert's definition of the term implies a variety of possible ways of teaching. This could include teaching by example, teaching by creating an environment, teaching by giving lessons (perhaps the most common variety), and other ways such as laboratory work, field excursions, and so on (Figure 2).

FIGURE 2

WAYS OF TEACHING



Clearly, several of these ways of teaching may operate at the same time and in the same place. In order for the university teacher to be in full control of the teaching mechanism, it seems logical that he needs a relatively clear conception of some ways of teaching.

Of the various ways of teaching available to the teacher, teaching by giving lessons appears to be the most commonly used approach in universities. (Of course, we have tried to make teaching appear more sophisticated by saying we teach by giving lectures). According to Herbert a lesson may be said to occur when teacher and student are in communication about subject matter. Furthermore, other conditions must be met. These conditions are essential components (parts) of the lesson. He has identified six of these components, viz. subject matter, the form of the subject matter, the form of the lesson, the media of the lesson, the grouping and location of students and teachers, and the influence techniques the teacher uses. Figure 3 represents the components diagrammatically.

A discussion of all the components of the lesson is not within the scope of this paper. Interested readers are referred to Herbert's book, *A System for Analyzing Lessons*. Suffice it to say that "a lesson occurs whenever there is an instructional relationship between students and a teacher who controls all six essential components".

Form in which Communication is to Flow

The form in which communication (about subject matter) is to take place is important to the monitoring of the teaching-learning process. Indeed

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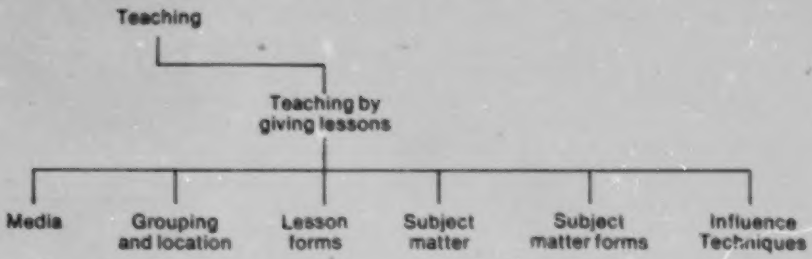
[5] J. Herbert, *A System for Analysing Lessons*, New York: Teachers College Press, 1967, p.9.

FIGURE 3

COMPONENTS OF A LESSON



scholars like Bligh[6] and Beard[7] have argued that this dimension largely determines how effectively particular objectives are achieved. Such forms of communication refer to the pattern of interaction that results from decisions about who, at any particular moment, may communicate about subject matter with whom. At the university there seem to be three major forms generally employed to communicate about subject matter. These are: lecture, discussion, and laboratory or field experiences. Each of these forms have important variations and each variant *and/or its combinations* may be employed by a teacher to achieve particular learning effects.

Because teachers tend to use forms of communication (methods) *which* or *with which* they were taught, they are often unaware of the diversity of discussion methods available. Bligh[8] and his colleagues have discussed a number of these forms and their variations in a book recently published, entitled *Teaching Students*. This is one of the small but rapidly growing number of books on teaching written particularly for the university lecturer. But the question may now be raised: What kinds of objectives are these various forms of communication best suited to achieve? This is taken up in the next section.

The Kinds of Objectives the Various Forms of Communication Are Best Suited to Achieve.

Rather than provide a full analysis of which objectives are best attainable by which form of communication, it is sufficient for the purpose of illustration to examine one or two samples. Since the lecture appears to be the most commonly used form in universities we shall comment on this form first.

What is the Lecture Best For?

To begin with let us pose the question this way: "How far does lecturing go towards creating the best conditions for learning at university level"? This question is important if we postulate that the basic purpose of teaching is to create the best conditions for learning.

Now, educational psychologists argue that learning is likely to be most

[6] Donald A. Bligh, *What's the Use of Lectures?* Penguin Education, 1972.

[7] Ruth Beard, *Teaching and Learning in Higher Education*, Penguin Books, 1972.

[8] Donald Bligh, *et al.*, *Teaching Students*, Exeter University Teaching Services, 1975. Copies may be obtained by writing to Exeter University Teaching Services, Streatham Court, Rennes Drive, Exeter EX4 4PU, England.

effective IF:

1. The student is intellectually ready for the learning activity, i.e. has the necessary intelligence and the necessary conceptual background that will enable him to assimilate the new knowledge;
2. He/she is motivated;
3. The lecturer/teacher has made clear to him what he expects him to know and to be able to do at the end of his course or at the end of a particular part of the course;
4. He gets feedback, knowledge of results, some indication that he is mastering the subject;
5. There is give and take between teacher and taught;
6. The learning is so structured as to aid the students' understanding; and
7. The student gets a chance to consolidate the learning before it is interfered with by another bit of learning.

Looked at in the light of the above criteria, the lecture does not come out well. In fact, Gagne[9] is probably right in concluding that "as a means of establishing conditions of learning the lecture leaves much to be desired". This is not to say that the lecture as a form of communication is useless. Laing[10] has outlined some tentative conclusions as to what objectives of university teaching the lecture is best fitted to achieve. These include:

1. Aiding grasp of the conceptual framework of a subject;
2. Helping to open a subject and provide a number of main routes through it;
3. Establishing and augmenting motivation to achieve;
4. Informing learners of the expected outcomes of learning;
5. Providing a more balanced and up-to-date survey of a field of knowledge than any textbook can offer; and
6. Being valuable, especially in science or applied science, in presenting material which would be too complex to understand without oral explanation or too wasteful to acquire otherwise.

The lecture is generally not good for the following:

1. Initiating students into the discipline of a subject, i.e. the methods of thinking appropriate to it; here the lecture has a minor role to play. This is likely to be better done through group discussion in tutorials and seminars, laboratory work, problems classes, projects, essay writing, field work, etc.
2. Experiments by social psychologists have shown that the lecture method is not particularly successful in changing attitudes. Attitude change is much more likely to be brought about by group discussion.

This brings us to the kinds of objectives best achieved by group discussion. It has been argued that the major objectives of post-secondary education are concerned with students' ability to think in certain ways, to foster certain attitudes, and to develop satisfying personnel relationships rather than the mere acquisition of information. If this is the case, there is evidence (see reference to Bligh, Laing and others) that these things are best achieved by discussion.

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[9] R.M. Gagne', *The Conditions of Learning,* New York: Holt, Rinehart & Winston, 1970, p. 371.

[10] *Op. cit.*

From the above we have observed that the lecture cannot be made an all purpose method of university teaching. If the major objectives of university teaching are to be effectively achieved, more expert use of other forms appropriate to the different objectives must be made.

The Examination System

In Malaysia at least, the examination system, for the primary school level right up to the university, has been the subject of heated debates from time to time. At the university, many of our colleagues view examinations, in their present form, as the main obstacle to innovation in teaching. Thus remarks such as the following are very current: "Examinations continue to dominate the teachers' interest in education"; "Students are not interested in getting an education; they only study to pass examinations".

The examination system has undoubtedly had a restraining or even reactionary influence, discouraging and limiting the possibilities of reform and innovation in university teaching. Dr. Sam Teng Wah[11] of Universiti Sains Malaysia's School of Chemical Sciences has given an example of this idea when he said:

> Examinations have often been considered a time for battle between those who must take them and those who have to set them. This view of examinations naturally gives rise to the idea that examiners are out to trap and fail as many students as possible and students therefore have to try and out-guess the other side.

Since examinations have such a powerful influence on teacher and taught, no discussion of the teaching-learning process can justifiably leave out this issue. So what is so bad about examinations? Why is there so much hostility towards the examination system, on the one hand, and such tenacious hanging on to it, on the other. People, who in their student days call for the abolition of the system, often become the most ardent champions for its retention. Why this ambivalence? Perhaps it is simplest to conceptualize examinations in terms of a very powerful weapon. It is often used for selection and control. But it can be equally effective for the promotion of learning. It can even be employed as a catalyst for innovation in teaching. Such a powerful weapon clearly requires that it be used expertly. Serious problems arise when it is not properly employed towards desirable ends. And here is the challenge. How many university teachers can say they know how to use examinations properly? How many know how to direct their use to achieving desirable ends? How many students fully understand the purposes and functions of examinations? In some countries people employed as examiners have to undergo rather specialized training. Setting examination or assessment questions has become a complex and sophisticated enterprise. Since most university teachers have not had professional training in education, may we not infer that most of them are not adequate for the task of examining students? This is a serious thought.

Incentive for Teaching

For this section the assumption is made that each country within this region has its unique policies and practices with respect to recruitment and promotion of university teachers. In fact, each university within any one country may have its unique system of incentives by means of which certain members of staff are accorded the approbation of their colleagues or their seniors. Thus no attempt is made to make generalizations regarding policies and practices for recruitment and promotion. It is however, useful to raise certain questions which relate to the theme of this paper — university teaching.

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[11] T.W. Sam, "Examinations: A View from the Other Side", a paper presented at an educational forum at Universiti Sains Malaysia.

If university teaching is to receive its proper attention are those engaged in it being offered the appropriate incentives? Are our universities actually rewarding research capability at the expense of teaching competence? The majority of new recruits at the immediate postdoctoral level have spent most of the preceding years acquiring the necessary skills to carry out research within their specialist disciplines. They would have had little or no opportunity to address themselves to the problems of undergraduate teaching. Do our universities recognize this problematic situation and make honest efforts to find a solution? Do the recruits have the necessary structural support to enable them to build professional competence in teaching? In what active ways is teaching ability taken into consideration when granting tenure and deciding on promotions? Is the instituting of teaching chairs directly within the parent discipline rather than in a separate School of Education a substantive recognition? (Some universities in England have actually done so). What about providing stimuli for the recognition of teaching ability through reputable journals in which academics can publish papers about the teaching of, rather than only research into, their specialist fields?

Let me conclude this section by stating that most university teachers have never received in their careers any kind of preparation for the tasks of promoting student learning and assessing students' progress, nor will they do so if they look for their rewards and promotions through achieving status accorded to them by research and other activities.

Preparation of University Teachers

Brief reference has been made to the kind of preparation university teachers had for their teaching tasks in the last section. Those are my personal observations and perhaps you should not take my word for it. So let us see what another has to say on the matter. Sunt Techakumpuch,[12] Director of the University Development Commission of the National Education Council of Thailand, has the following to say:

> Related to this problem is also the apparent lack of knowledge of how to teach on the part of the university instructor. At present no knowledge in teaching methods is required of a university teacher if he is knowledgeable in the subject matter to be taught. It is believed that this condition helps to contribute to less effective educational effort at the university level.

Other similar statements concerning the preparation of teachers for teaching at universities could be culled from other sources. However, the above quotation is sufficiently well put to make additional statements redundant. Suffice it to conclude by saying that it appears that much more attention needs to be given to professional preparation of university teachers for teaching. Much more discussion is needed on how, what and when such a preparation ought to be made.

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[12] Sunt Techakumpuch, "Thai Universities: A Glimpse at Some of the Issues", in Yip Yat Hoong, ed., *Development of Higher Education in Southeast Asia: Problems and Issues*, Singapore: RIHED, 1973, p. 98.

CONCLUSION

University teaching is a complex series of actions. It may be considered as a system designed to attain certain objectives of university education. Preparation for engaging in this task may have been neglected in the past. Thinking people in various parts of the world are giving the issue serious consideration and action. Perhaps it is now time for Southeast Asian universities to confront the problem boldly and imaginatively.

DISCUSSIONS

Willi Toisuta

In some countries such as mine, the university is more than an institution for study and research. It has a three-fold-mission of education, research and community service. Thus, theoretically, it reflects an awareness of the importance of the interaction between the higher education system and the system's environment.

As the university is a productive undertaking, in the sense that it will supply its product to the labour market, such interaction is crucial for increasing the efficiency of the teaching-learning process within the university. This is needed to keep the education offered relevant to the needs of the economy for high-level qualified manpower. From such a point of view, the teaching-learning process is related to the "fitness" of the graduates, i.e. whether they can satisfactorily meet the job requirements set by employers.

The functional relation between university education and the labour market, however, is only one side of the coin, the other is the desire and aspiration of students for personal development and cultural enrichment. This is just as important in achieving a critical and democratic society.

I would like to make two further comments on the above.

Firstly, whatever approach or combination of approaches the university adopts to realize its mission, it should be accountable for the professional competency of its teachers in imparting the knowledge and skills which are sought by the students. The common problem is that while our universities have committed themselves to such a responsibility, there is still evidence to show that not enough attention has been given to the recruitment of teachers and improvement of the teaching performance of these teachers. New emphases such as process-learning rather than content-learning, and new styles of learning by individuals and small groups which characterize the current theories of learning, have brought demands for new teaching skills and competence. In order to ensure effective learning on the part of students, the university has to stimulate a continuous awareness by its staff of the importance of in-service training in the methods of teaching at tertiary level. The teachers must develop skills in handling new teaching aids in line with the current development of educational theories and practice.

To conclude my first comment, I suggest that our universities should develop (or where there is one already existing, continuously improve) a centre whose primary concern will be the advancement of teaching. Such a centre should undertake a whole range of activities as a service to improve the teaching performance of the academic staff. Two related services will be needed:

1. *An educational service* with activities ranging from informal conversations to regular discussion groups, seminars, workshops and lectures on subjects related to methods and systems which can be utilized for improving the effectiveness of the learning process;
2. *A technical service* which will provide facilities needed to carry out the educational service. Where necessary a curriculum laboratory should be installed to serve as aplace for experiments in methods of teaching. It is important to attach to the curriculum-lab a production section in order to produce teaching aids in the form of graphic, photographic or cinematographic materials for teaching. The technical section will therefore be equipped with selected hardware for production purposes.

My second comment will be related to the assumed role of the university as a dynamic force for modernization and development of the country. As I see it, this is one direct implication of the university's mission in national development.

The problems of a developing country such as over population, the rural-urban dichotomy, an unbalanced economy, poverty, community health, and nutrition problems, and the effect of all these on the educability of the child make me wonder how we can really effectively help to prepare individuals who are keen and dedicated to build a just and balanced society. It is obvious, of course, that the pressure and competitiveness of an urban-industrial oriented society divert the idealism of newly graduated students. On the other hand the pattern and structure of university teaching which emphasizes teaching of traditional disciplines usually supports and reinforces the life-style of the elite group within a modern-industrial oriented community.

How seriously are universities concerned with speeding up rural development and what kind of development do they seek anyway? Lacking real experience in formulating the "proto-type" for the "new" rural community, do the universities see it as identical to, rather similar to, or very different from an urban community?

In the light of these comments, I believe university teaching for national development should be problem-oriented rather than discipline-oriented. A problem-oriented university will start to fulfil its mission by identifying certain crucial development problems and designing programmes which will help to solve them. Such programmes, if we are to be scientifically responsible, must incorporate adequate monitoring systems. By their very nature they will cut through the traditional compartmentalization of the university and instead provide a rich interdisciplinary approach to teaching. Such an approach will demand a new structure and in my opinion would mean gradually doing away with the traditional European-inspired structure of independent faculties and departments. If this is the model required for "a university for national development", as we claim our universities are, ... then why not?

Pradit Wichaiyadit

Although I agree fully that the means and methods of university education need to be looked at, I feel that this is not the crucial problem facing our universities. In my opinion, the problem which needs to be studied first is that of the formulation of the aims and objectives of the universities in our countries. I feel that these aims and objectives should focus on the personal development of the graduate, in terms of his perception of his role in society and his responsibilities to society at large. The development of the individual is the first step towards the development of the society. Since the university is one of the institutions where values and attitudes are being transferred from one generation to another we must formulate a set of objectives — those values and attitudes we feel to be essential for our national development, and which we would inculcate in our youths.

Therefore we need to reexamine our objectives, and particularly, we need to emphasize the affective domain objectives more than we do at present. This is not, of course, saying that the cognitive and psychomotor domain objectives are not important. They are, and will always been part of the teaching functions of the university.

The questions which arise now are: (1) What are the values and attitudes which need to be inculcated in our graduates, and (2) What kind of ideology do we want for our countries?

I feel that if we can formulate our objectives, and incorporate these values and attitudes, then our universities would truly be involved in national development.

CURRICULUM DEVELOPMENT IN SOUTHEAST ASIAN UNIVERSITIES: NEW APPROACHES

Partomo M. Alibazah

In speaking about new approaches in curriculum development among universities in Southeast Asia, I must admit that I have the feeling of being an ignoramus who is challenged by a gigantic task. It would be presumptuous to think that this particular part of our regional conference's theme can be dealt with in a general tone, for the very reason of the diverse situations and conditions prevalent among the member countries.

Historical background, to begin with, is different from country to country, ranging from Thailand which has never been colonized, to the other countries who were influenced by their respective colonial masters. The latter also differ considerably in basic views as to how their tertiary educational institutions should be developed, partly because of the differences in their earlier Western models, and partly related to the individuality of each nation's development policies afterwards.

It is necessary therefore, when attempts to highlight new approaches are made in this paper, to caution the reader about the heavy bias on my part due to my own background and the surroundings to which I have been confined in my daily life. Nevertheless, we might agree on the very basic principle that we can learn a great deal from cross-fertilizing our ideas and experiences during the discussions in this conference.

In general it can be assumed that new approaches to curriculum design cannot be forthcoming unless certain requirements conducive to their occurrence are fulfilled. These are among the basic prerequisites:[1]

1. The existence of an *initiating nucleus* within a university seems of paramount importance since it becomes a germinal centre from which radiates the spirit of change;
2. *Staff development* has been a prerequisite for educational development and only where there has been a high level of faculty scholarship and training, and social commitment on the part of educational planners, have new educational directions been possible;
3. The new commitment is social and ideological in nature, expressed in a *new arrangement of policy determining power* overcoming barriers against ideas or methods coming from other faculties, administrators, and community;
4. *A central planning mechanism* operates to encourage inter-disciplinary programmes and to spread new ways of doing things, including the circulation of information on innovative projects.

Parallel to access to potential resources, and having the proper mechanism such as mentioned above, certain characteristics which denote an institution as having the right conditions to contribute to development, can also be identified. On the basis of the study in various locations covering Asia, Africa, Mexico and Latin America, the International Council for Educational Development took note of the following characteristics:

1. *The institute has identified a need.* The first step is to identify the most urgent problem or set of problems. Contrary to common

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[1] International Council for Educational Development, *Education in the Nation's Service. Experiments in Higher Education for Development.* Final Report, May 30, 1975.

expectations, the identifying of urgent needs seems as confusing an endeavour as the building of the Babylonian tower. Basically, universities are traditional bastions — "guardians of human values". While it is acceptable that these values involve dealing with questions such as quality of life to a sophisticated degree, one keeps wondering why they are not more accessible to the general masses. Instead the more common to tendency is to keep these values restricted to the privileged few.This results in a tendency to look inward rather than out to what priorities are to be met in terms of community needs.

In order to cope with a set of problems, be it social such as health, agriculture, housing, employment; or educational such as more effective learning, better training for jobs and careers; or a combinnation of both such as the need for improvement in rural health; the university should determine its role in the total system in which it is situated. Hence, role identification becomes crucial. The task is not a simple one, as there is an abundance of distracting values which tend to blur the sense of mission.

Particularly burdensome is the basic academic question of whether or not universities should concentrate on pursuing knowledge for the sake of knowledge, or primarily disseminate and apply knowledge for the needs of society. This controversy is further complicated by the unresolved question of how to cope with the policy of utilizing the national language as instruction medium, in place of a traditionally foreign language. Two countries do not have this problem: the Thai language (and script) has served as the medium since the beginning of the educational system in Thailand; and in Indonesia, the universities have succeeded in improving and modernizing Bahasa Indonesia for scientific use, so that it is now using latin script and is unhampered by complicated grammar.

2. *It has formulated objectives.* Specificity in formulation of objectives, based on identified priorities to meet the needs, is conducive to well defined programmes of action. Comparatively speaking, objective formulation is tedious and requires skills in expression, using the right words and stressing the proper emphases. Not only is sharp formulation of objectives necessary to clarify the aims and goals in order to serve as guidelines for the intended actions, but such formulation frequently also serves as an important trigger to obtaining the necessary funds — an item for which univerisities generally are dependent on outside sources.

3. *It has sought and acquired effective support.* Since many community and national needs are determined by the environment, the system of higher education in general and the institution in particular should seek and acquire effective support from key policy decision-makers both governmental and from the community.

   Within the system, it should get support from faculty members and students as well. This seems more difficult to obtain than support from the environment, since it is intrinsically interwoven with accepted norms and is primarily psychological in nature. Examples of factors to be considered are those dealing with salaries and incentives, benefits, facilities and career opportunities within the reward system. Students in particular, need to be consulted since they are the most important component in the educational system. Generally they are likely to support programmes that will improve learning, increase job opportunities and open new career possibilities, but will resist strongly if they are left with the feeling of being manipulated for purposes which do not take their well-being into consideration.

4. *It has plans and programmes to carry out its objectives.* Stated objectives only become reality if they are followed up by actions as outlined in plans and programmes. It is not unusual to find beautiful thoughts, analyses, results of seminars or even inspiring lectures, among the faculty and students. But they are often like the fantasies of those who dream of going to the moon by flying carpets.

   Actions following stated objectives can also be found around us,but a complete, programmed, sustained effort is more likely to occur if the above stated prerequisites are fulfilled. Even then, certain fields which are essential for complete success might not be adequately covered; for instance organization and staff development may not be sufficiently reflected in the plans. Likewise, steps to invite participation are left to incidental events. Communication within and among subsystems frequently needs supporting subactivities, such as preparing the field for cooperation and collaboration, all of which needs to be adequately planned and executed in advance.

   With regard to improving organizational effectiveness, plans for needed actions covering behavioural aspects are often neglected to such an extent that the total plan might backfire. On the other hand, in an effort to secure full participation, cumbersome structures and organization charts may be developed, only to end up decorating walls of operation rooms with no guarantee whatsoever for success. Indeed, since human behaviour is the basis of effective action, it is imperative that planning for change should be based on behavioural criteria as a key factor[2].

5. *It relates teaching, research and service.* Most institutions of higher education in the region are now stating that their primary functions are to cover education, research and service — the latter sometimes stressed as service to the community. Many of the activities deal with each function as a separate item, indeed sometimes to the extent of competing with each other for resources.

   To be really effective for development, however, interaction and integration of all three aspects are indispensable. The component of research especially, true to the spirit of search for the truth prevalent among academic circles, can improve the quality of action in development projects, if it is linked to support aspects of teaching and service.

6. *It uses a multi-disciplinary approach to solve development problems.* To induce interdisciplinary resources to work as a team, usually necessitates organizational reform which differs from the usualy disciplinary structure. Autonomy will have to be sacrified for interdependency. However, since traditional attitudes are not easy to change, workable systems through integrated programme

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[2] W.G. Bennis, *Organization Development: Its Nature, Origins, and Prospects*, Addison Wesley, 1969.

management can be created. To generate a concerted effort involving many resources is perhaps the ultimate art in programme management, something which our universities still have a great deal to learn about, and perhaps they can do so through active experimentation starting in a small way and progressively growing larger. A good analogy can be found in music — the degree of collaboration is somewhat like a full range between having a chamber orchestra to a full-fledged symphony orchestra. The music itself is the ultimate output, programmed in detailed, while the concerted effort is conducted by the programme or project manager.

7. *It draws on a history of educational development* (and concern for social issues). Faculties in their eagerness to implement integrated development programmes, tend to overlook those particular feelings of security to which colleagues are psychologically attached. If there is no history of inter-faculty collaboration, let alone a high degree of social awareness among faculty members, a development programme cannot easily take root. Fundamentally the rejection can be traced back to the fear of new and unfamiliar things.

   The issue is not a controversy between "tradition" and "new", but in order to get effective changes, one should look into traditional values conducive towards change.

   The dilemma evolves around the question of "how to make familiar things new, and how to make new things familiar".[3]

8. *It has a means of evaluation*. The effectiveness of a programme should be judged through the criteria which the programme seeks to obtain. Unfortunately, educational systems have a tradition of granting diplomas and degrees which become substitutes for achievement of actual learning. The impact of manpower training should be measured in terms of what graduates do. Training in rural health among undergraduate medical students for instance, will have little influence towards achieving the goal of better rural health, if the young graduates cannot be induced to work in the rural health services.

9. *It has the capacity for innovation, adaptation and discovery*. Universities, being social organizations, should function as open systems, and this necessitates a degree of openness among their people. Opportunities for improving openness could be multiplied and enhanced through imaginative management.

   Encouragement through travel abroad; visiting of faculty members, both domestic and foreign; research opportunities; attractive incentives and salaries, and many other supporting programmes should be given due attention.

   The freedom to discover new methodologies through experiments, even to the degree of taking risk in pursuing unpopular views contrary to accepted values, constitutes an important aspect of development. When adventures in ideas are restricted either through real or imaginary prohibition, the essence of being an institute of higher learning is smothered.[4] Its ill-effects may take years and generations to remedy.

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[3] R.P. Lynton, *The Tide of Learning. The Aloka Experience*, Routledge & Kegan Paul, 1960.

10. *Interaction and interdependence with other educational subsystems.* Rigidity of adhering to boundaries set up by regulations or suspicion, can best be avoided through activities such as opening university courses to the general public, general and specific upgrading programmes, invitations to outside resources to join, and lending of faculty resources to community programmes, and numerous other untraditional activities. Bridges to and from society should be built in order to cross the gap between institution and environment.

In the past, emergency needs for secondary school teachers have been filled by drawing on university students. Results so far have been quite encouraging — without these undergraduate teachers, an expansion of schooling opportunities up to a thousand-fold could have never been achieved in Indonesia. In the beginning, this practice may involve sacrificing quality, but once a broad base is obtained opportunities for growth and innovation can be expected to occur on a greater scale.

Universities may have a totally different responsibility in being perhaps the only attractive place to enter after secondary education, at least in countries where polytechnical training institutions are scarce. Therefore the universities should consider devising educational and training opportunities, providing multiple entry and multiple culmination.

Developing countries typically try to draw up ambitious development programmes, expressing the needs which have to be achieved in a short time. Sometimes many of the desired targets seem unattainable without the necessary changes in the educational structure and process itself. Since the right type of manpower needed to execute the plan is usually scarce, the use of expatriates — though expensive — seems justified. This should, however, be integrated with an overall manpower development plan within the nation itself. Imbalances in the type of graduates produced should be remedied, although it is equally true that tailor-made educational products can never be achieved.

Since projections of supply and demand in manpower should only be used as guiding principles, it is conceivable that the *flexible type* of graduate is preferred. To make this a reality, the traditional funnel shaped uni-directional educational structure — which occurs in tertiary education should be changed into a multi-directional one, consisting of interchangeable packages of learning experiences or modules which give opportunities for entrance at many levels, and possibilities to get out of the system if the need arises, with reentering opportunities suited to career plans.

Ideally, such a plan calls for tertiary education with some major characteristics which, hypothetically at least, should meet the following specifications:

10.1 Structured in interlinking cycles, say first, second, and third, each cycle being connected to a variety of job opportunities.

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[4] T.S. Kuhn, *The Structure of Scientific Revolutions.* Sec. ed. Vol. II, No. 2. University of Chicago Press, 1973.

The first would consist of broad college level learning opportunities with exchangeable credits, so as to promote vertical and horizontal student mobility, and to absorb dropouts into suitable fields. This cycle should encompass credit as well as non-credit opportunities linked to post-secondary job preparation. Although diplomas or certificates are not the prime aim, any *dēbouchē* may be given due certification for career purposes. The total enrolment in the first cycle should be as large as possible, since most students achieving 12th grade-education can be assumed to have the qualifications for a 12 year' training towards a post-secondary job, although they have to achieve a certain minimum level of competence to pursue higher education. Those who have fulfilled the requirements, may choose a learning path to their inclination.

The second cycle is a restricted one, leading to a master's or a professional degree. It may consist of a variety of learning path opportunites, although each unit within a chosen path tends to be more specific, thus reducing the number of choices as compared to the general nature during the first cycle. A certain flexibility should be maintained by electives, and these electives could also be made open to non-degree attendance by the general public who may want to further their life-long education.

The third cycle is meant for educational opportunities towards highly skilled professionals or those who want to become scholars. A Ph.D. level of education might be appropriate, although a professional career path into specialities should also be made possible.

10.2 The *learning experiences* within each cycle should be the main yardstick rather than time spent. A system of incentives and disincentives should be created as a gate-keeping mechanism to keep out those who might confine themselves indefinitely and uninterruptedly within one cycle. A sandwich type learning path, for instance, where work experience is required before entering a certain level of education, will prevent unproductivity.

The question of "quality and standards" in the usual academic sense, will be rendered irrelevant by the sequential module experience. On the contrary, there will be no danger of diluting effects occuring, since each module provides different emphases, and each student, after having obtained learning experiences through a chain of (interchangeable) modules, will have gained a well-rounded education.

10.3 Provision of *teachers* for the general educational system should be pursued as an intrinsic opportunity through a learning path suitable to their needs. Opportunities for high-level educational careers may be accommodated in the third cycle as well, since many modules may encompass learning experiences where teaching, research and service components are integrated.

The degree of flexibility offered by a model like the one above, hopefully will create an atmosphere of openness conducive to further experimentation, and hence offer sensitivity for further adjustments as the needs arise. Interdisciplinary cooperation will be enhanced, as there will be no independent autonomous entities with the tendency to become closed systems. Resource allocations will also be far more open to easy access, since orchestration of the programmes is the main core activity. Faculty members will also be more accessible, since they also have quite a variety of choices and mobility in joining interesting programmes — or creating innovative programmes of their own.

Admittedly, the new organization definitely needs a new "breed" of university administrators. But university administration is in great need of modernization anyway, and this can be made more relevant by changing the pattern of management to suit the requirements of the new system. Besides, many of the traditional administrative functions are still usable in the new model. Democratization of the administrative functions will also be enforced to a certain degree which will certainly not be less than what is prevalent in the traditional system.

Guidance and counselling will play a major role, especially in the first cycle. As the system shows a far greater flexibility than usual, continuous feedback information is a key factor, necessitating the creation of a data storage, retrieval, and utilization system of a new nature.

Costs may rise sharply, but it is not inconceivable that the ultimate benefit in achieving conditions favourable to a productive learning society, which cannot otherwise be reached through traditional systems, will in the long run outbalanced initial increase in budget requirements.

Turning our attention from the hypothetical model to what is happening in Southeast Asia, using the observed criteria for success as mentioned by the International Council for Educational Development report, some examples can be discussed below.

Inter-university programme using multi-disciplinary approach to face the needs of development is being carried out by Kasetsart, Mahidol and Thammasat Universities. This programme deals with identifying and solving rural problems in the Maeklong area. Another rural development interdisciplinary programme has been started by the University of Indonesia and the University of Leyden, in which research, teaching and public service is integrated. Students in medicine, social sciences, psychology, engineering are working in teams with faculty members. The teams spend two to six months in the Serpong rural area, working closely with the local administration.

Inter-faculty and inter-departmental programmes are more abundant, since they are less extensive and more easy to carry out. Agricultural and social economic aspects are tackled in various provinces of Indonesia, partly as requested by government development programmes, but partly also as spearhead projects of the Gadjah Mada University and the Agriculture Institute in Bogor. Community medicine curricula touching on social and economic fields are carried out by several universities in Indonesia, usually closely cooperating with governmental agencies such as the Ministries of Health and Home Affairs. The Community Health Programme at Mahidol University in Thailand is another similar example where students and faculty are involved in integrated teaching, research and service activities.

Similar programes are in existence or in a planning stage, elsewhere in the Southeast Asian region. A special effort to obtain a *large reservoir of trained people* for dealing with urgent development problems is conducted by the Development Academy of the Philippines. The Academy has developed a combined programme of training, development-oriented research, and action.

Among the examples above, it is evident that students *training in extramural settings*, especially those dealing with the formation of their feelings and *attitude* towards problems in society, where application of knowledge is organized through interdisciplinary approach, could be seen as genuine efforts from the higher educational institutions to make their education relevant to the urgent needs of the community and of national development.

Approaches in *teaching-learning* sessions, where untried methods are being developed and searched for, are far more difficult to assess, since the ultimate results are at best judged from the efficiency of internal criteria — such as lower dropout rate, better achievement, faster turnout of graduates, etc. For instance, medical students undergoing new teaching-learning methods coupled with experiences in the rural community, may give excellent results in performance, but there is no guarantee in the short term that rural health is indeed improved, which is after all the main objective of that particular curriculum. Besides, there is a tendency that unless the total system of health care itself is also changed, such as effective health care to rural populations, the ultimate result may suffer from the partial nature of this change. On the other hand, there is still the hope that, as the students become better equipped with the necessary tools for future work in rural settings, the ultimate effectiveness will be more favourable.

Adult education is another field in which many universities are becoming more and more involved in extension courses, and in degree or non-degree granting evening courses; these are examples of opening university facilities to community demands for continuing education. At the time that a learning society is clearly developing, this type of university extension will be more and more prevalent, and efforts towards achieving it should be continued and encouraged.

Universities are more and more gearing towards action, as in the case of the Development Academy of the Philippines, the Consortia system in Indonesia, community-oriented activity programmes and the like; and there is thus a growing tendency for these activities — utilizing university staff and resources — to become more and more detached from the parent institutions, and to develop into independent institutions by themselves. Since in addition the university is still a place where theoretical knowledge is being taught and developed, this detachment of action-oriented staff members can create a kind of isolation of students and faculty from the social and development problems handed over to the new institutes. Academic and teaching duties can also become remote for these institutional staff. Temporary duties on a rotating base may provide some means to prevent such alienation and promote enrichment through cross-fertilization.

Coming back to the hypothetical model as described above, there might be means and ways within the university organizational set-up which can productively incorporate all aspects of teaching, learning, research and community service to such an extent, that crystallization of new directions could be prevented.

The negative entropy which is needed by all open systems, such as one can consider the university to be, can be absorbed by utilizing the feedback for the benefit of the total organization rather than separate independent or detached institutions. It is to be hoped, that as experiences accumulate new insights on this matter can be obtained.

DISCUSSIONS

Francis Wong Hoy Kee

There is no doubt whatever that new approaches to curriculum development in Southeast Asian universities are timely and much needed if our universities are to cope with the four major changes in university education today. These are:

1. The phenomenal increase in university enrolment;
2. The explosion of knowledge;
3. The closer links between universities and society;and
4. The changes of medium of instruction.

1. Many Southeast Asian universities (e.g. Malaysian universities) have been patterned along the lines of the West where for a long span of time education (and higher education in particular) was for the elitist few. Today the cry all over Southeast Asia is for education, including university education, not only for the select few but for the masses. Evidence of this is seen in the growth of university education in Malaysia where there was only one university (University of Malaya) a decade ago, and now there are five institutions of university status. In the words of the Deputy Director-General of Education, Malaysia, Haji Murad bin Mohd. Noor, "University education in Malaysia has expanded more than any other part of the education system" (vide "Existing Relationships Between Universities and Government Planning Agencies in Malaysia", in *Role of Universities in National Development Planning in Southeast Asia*, RIHED, 1971). New approaches to curriculum development in our universities become imperative if this aspiration of the people is to be fulfilled meaningfully.
2. We know that the acceleration of knowledge is so great today that "one has to run as fast as one can, just to stay where one is"! Witness the proliferation of courses in all our universities. This, too, is the rationale for a body like the Malaysian Higher Education Advisory Council which was set up specifically to keep track of the growth of university education. Hence, too, the *raison d'etre* of a regional body like RIHED.
3. When RIHED held its first Workshop in 1971 on the "Role of Universities in National Planning in Southeast Asia", one recurring theme was the call for the erasure of the ivory-tower image of our universities. Today, the picture is quite different. There is a close partnership between Southeast Asian universities and society; for example, in Malaysia, between the Economic Planning Unit of the Prime Minister's Department and the country's five universities. In addition, there is today a desire among Malaysia's university students to be involved in community welfare/ventures, for example, the "gotong royong" projects undertaken by university students. Witness, too, the priority given to university teaching and research which are geared to the national interests.
4. The change in the medium of instruction in university education, is well illustrated by the case of Malaysia. The change-over from English to Bahasa Malaysia, the national language, as the medium of university education, will be completed by 1983. This, of course, has far-reaching implications especially on teaching processes and techniques.

The above-mentioned changes in Southeast Asian universities make it imperative that not only the curriculum itself be up-dated/changed but also the teaching techniques. Southeast Asian universities must find new approaches to curriculum development to make their university education more meaningful and relevant to Southeast Asia. Indeed, this may require a reexamination of the philosophy and the overhauling of the structure of university education in Southeast Asia. And in all this, the caveat of Professor

Ungku A. Aziz remains valid, namely, that while striving for the promotion of national interests through the Sciences and Technical Education, our Southeast Asian universities should not jettison the cultural aspects of education (vide "Orientation of Arts and Science Education to Meet National and Regional Needs", in *Role of Universities in National Development Planning in Southeast Asia*, RIHED, 1971). I would go one step further and make a plea that the new approaches to curriculum development in Southeast Asian universities be such as to help maintain a balance between the claims of the State and those of the individual.

Wichit Srisa-an

In turning our attention to the topic of "Curriculum Development in Southeast Asian Universities", we are confronting a subject of major regional concern. However, since each of our countries is likely to have a unique concept of the role of the university, determined by varying features of our social framework, certain problems existing in one country may be of no concern in another. My remarks, therefore, will be based on the experiences gained from the Thai university system, and for this reason, some of the comments will reflect situations that may seem more local than regional.

Since the preceding paper has covered almost all the salient points pertaining to the new approaches to curriculum development, my additional observations are meant to be supplementary to what has already been discussed.

I would like to add three major areas of concern due to the traditional imbalances of the existing curriculum:

1. *The proper relationship between emphasis given to "academic excellence" and "academic relevance".* These two aims are not in conflict so long as academic excellence is not pursued at the expense of academic relevance. One of the imbalances that has marred the curriculum since its earliest days has been an alienation of the educational system from some of the country's needs because of over-reliance on Western-type curriculum organization methods. The traditional curricula were westernized in both form and substance because the majority of faculty members were trained in Western institutions operating in the framework of Western industrialized societies. This style of curriculum was subsequently transplanted into the higher education system, despite its irrelevance to the realities of our society. As there was not a sufficient body of knowledge derived from local research findings to permit an educational system to crystallize around a unique national framework, the Western models were imitated out of necessity. The imbalances that arose from this transplantation have survive from the past into the present, and should be eliminated.
2. *The balanced curriculum components with regard to specialized and general education.* This is a problem of balance between breadth and depth, and between manpower and manhood.

   Since their inception, institutions of higher learning have been influenced in developing their curricula by traditional objectives of higher education. This meant, until the very recent past, that the most important function of the university was to produce specialized personnel narrowly trained in various disciplines for work in government services. In performing this function, the university acted in almost the same manner as a high-level vocational trade school. Every course of study led to the fulfilment of a specific and specialized segment of the prevailing manpower demand.

General-liberal education therefore for many years had no place in the undergraduate curriculum, and the inclusion of general education in programmes of study is a comparatively recent development. The step-up and diversification of demands after World War II confirmed, however, that the graduates emerging from the then existing system were far too narrowly trained. and were often missing the forest for the trees as they attempted to solve the many extremely broad, complex problems that beset the country as technological development began to speed up. The idea of general education at the university level gained adherents, and the implementation of this trend of thought become one of the leading movements in postwar higher education in many Southeast Asian countries.

Ancient philosophers teach us that men are men (women as well) before they are doctors, teachers or engineers. The belief that high school graduates are adequately prepared in those fundamentals of humanistic education which underlie mature citizenship is most doubtful. Current thinking holds that they are not sufficiently broadly trained to respond productively to the problems of contemporary daily life. Our institutions of higher learning must provide both manpower and bases of effective citizenship in our democratic society. If this is to be achieved, a new way of organizing curricula must be found to foster such a balance.

3. *Lack of balance between theory and practice.* This is due to the fact that existing curricula are very disciplinary, classroom — and laboratory-based, and book-knowledge oriented. New approaches to curriculum development should take into account the curriculum programmes of a multi-disciplinary nature, and should be community based with special emphasis given to proper balance between the theoretical classroom activities and the "experiential" education. By "experiential" education, I mean learning activities outside the normal classroom environment, the objectives of which are planned and articulated prior to the undertaking experience. The experiential education includes internship, field experience, practicum, cultural experience, service-learning, work-study programme, cooperative education, etc.

To conclude, new approaches to curriculum development must be found to foster better balances in the various curriculum components, to make the curriculum more flexible and relevant to meet the national and individual needs and to facilitate and optimize effective teaching-learning processes in Southeast Asian universities.

ALTERNATIVES FOR TEACHING-LEARNING PROCESSES IN SOUTHEAST ASIAN UNIVERSITIES

Ernesto O. Javier

INTRODUCTION

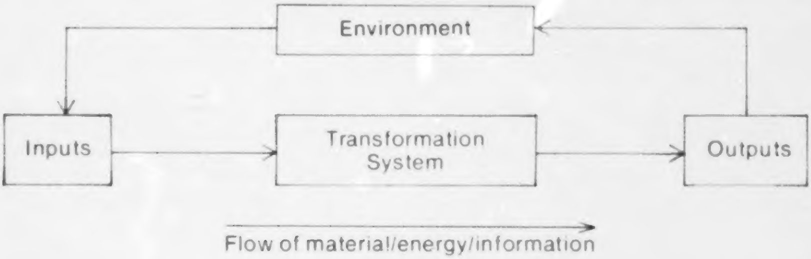
In accordance with the suggested guidelines which I received for the preparation of this paper, my remarks will be divided into three principal parts: (1) a review of some of the more significant innovations in educational technology, (2) a brief discussion of some programmes for faculty training and development, and (3) a few suggested alternatives for the optimization of teaching-learning processes in Southeast Asian universities. A paper of this sort will necessarily be incomplete. It is quite possible that some of the innovations, programmes, or alternatives which you consider important will not be mentioned here. Perhaps we can take these up during the discussion period.

The conceptual framework within which this paper is organized is that of the organization (in this case, the university or college) as an *open system*. A university is a system in the sense that it is made up of various parts or subsystems, each of which has a specific function within the system. An open system is one that is constantly interacting with its environment. Changes in the environment impinge on the university as demands for change within. And on the other hand, the "products" or outputs of the university affect the environment in turn.[1]

One way of conceptualizing the university as an open system is to consider it in terms of an input-throughput-output model. The inputs are, for example, the students. These inputs undergo some transformation process, e.g. the teaching-learning process, and are then "exported" to the environment as outputs. The graduates become in turn, sources of new inputs (Figure 1.)

FIGURE 1

GENERAL MODEL OF ORGANIZATION AS AN OPEN SYSTEM



Within the theoretical framework of this paper, the first topic, innovations in educational technology, can be considered as changes in the university's environment to which it must respond creatively if it is to perform its task efficiently and if it is to turn out the kinds of graduates that its environment needs. Technology may also be considered as a form of input. The second topic, faculty training and development, may be viewed as activities of four subsystems: the productive subsystem (concerned with the through-put process), the supportive subsystem (concerned with procurement of inputs), the maintenance subsystem (concerned with tying people to their functional roles) and the adaptive subsystem (concerned with organizational change in response to changes outside the organization). The third topic, alternatives for the optimization of the teaching-learning process, may be looked upon as an open system's attempts to explore alternative ways of maximizing outputs, either quantitatively or qualitatively or both through efficient performance.

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[1] D. Katz and R.L. Kahn, *The Social Psychology of Organizations*, New York: John Wiley & Sons, 1966.

INNOVATIONS IN EDUCATIONAL TECHNOLOGY

By innovation we simply mean "a deliberate, novel, specific change, which is thought to be more efficacious in accomplishing the goals of a system".[2] Good's *Dictionary of Education* defines educational technology as "the application of scientific principles to the designing and implementing of instructional systems ... also used in more limited sense to describe a reliance on equipment-oriented instructional techniques such as computer-assisted instruction, simulators, multi-media presentations, and media-based self-instruction".[3] We shall use the term educational technology in the latter, narrower sense. As a matter of fact, because of the extensive developments in the technology of education, we shall further limit our discussion to two categories of media: Big Media and Little Media.

By *Big Media* we refer to the more complex, and sophisticated, usually expensive devices of instruction such as instructional television, films, and computers. As Schramm points out, Big Media require not only sophisticated and expensive hardware, but also highly skilled and trained personnel for both software and hardware responsibilities.[4] Under *Little Media* are included the less costly and less complex devices such as the radio, tape recorders, film-strips, slides, transparencies, and visuals of all kinds. Because of their relative simplicity, these devices can be operated by most classroom teachers after a little practice.

1. Big Media

1.1 Television

ETV or ITV has been employed both in the industrialized as well as the developing countries. It has been used in ways as divergent as the Open University of Great Britain and the Telesecundaria of Mexico. Television has also been extensively used not only to teach single subjects but also to institute nation-wide educational reform as was done in El Salvador, the American Samoa, Niger, and the Ivory Coast. Television has been used to teach different levels — from pre-school children as in the famous Sesame Street programmes, to university students as in Ramkhamhaeng University in Thailand and many other places.

One of the attractions of educational television from the teacher's viewpoint is that as an audio-visual medium, it reaches the student through two senses instead of one. The assumption here is that the audio-visual approach facilitates learning more effectively than the mono-channel one — either by sight or hearing alone.

Educational TV has been the object of many studies. One of the most painstaking attempts to bring together for evaluation the different studies that compared television with ordinary classroom instruction was that conducted by Stickell in 1963, and reported by Schramm in *Big Media, Little Media.*[5]

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[2] M.B. Miles, *Innovation in Education*, New York: Teachers College Press, Columbia University, 1964, p. 14.

[3] C.V Good, *Dictionary of Education*, New York: McGraw-Hill Book Co., 1973, p. 572.

[4] W. Schramm, *Big Media, Little Media*, Stanford University, 1973, p. 3.

What conclusion may we draw from these studies? This much can be said: Research conducted to compare the relative effectiveness of television and classroom teaching does not give us any basis for saying that students learn more or less from television than from ordinary classroom teaching.

Among the advantages of educational television are: (1) many instructional materials can be presented via television that cannot be presented in lecture sessions — field trips, large sized and protracted scientific experiments, etc., (2) instructors prepare materials more carefully for presentation on TV than for typical class lectures, (3) ETV makes instructors "see themselves as others see them".

There is little doubt that in spite of the misgivings of some educators, television is here to stay. Used conscientiously and in conjunction with other media, ETV can be of significant service to developing countries especially in those places where qualified instructors are few and the prospects of enough teachers to meet rapidly increasing college populations are not very bright.

1.2 Film

The uses of film for classroom instruction is pretty much similar to those of television. As a matter of fact, many of the ETV materials are telecasts of films. Some of the advantages of the film are the relatively wide screens for viewing (although huge TV screens are also becoming more common) and the ease with which a particular lesson can be repeated as often as desired. (Video-cassettes, however, are also now becoming more easily available and their quality has been steadily improving). Still another advantage of the film is the greater control of the teacher over the scheduling and programming.

Instead of attempting to assess the relative effectiveness of the film in comparison with classroom teaching, it may be more profitable to cite some examples of experiments designed to measure the amount of learning derived through the use of the film.

Table 1 data indicate that films can contribute in a significant way to the effectiveness of the teaching-learning process. One of its disadvantages is the more or less fixed character of filmed materials. Film loops as we know them today are not erasable. This means that an adequate film library is required for programmes that rely heavily on films. The advent of 8mm and super 8mm films have made this medium less cumbersome than the 16mm and the 35mm commercial films with their large projectors.

1.3 Still Pictures

In addition to motion pictures with or without sound, another class of teaching aid available are slides, filmstrips, transparencies, etc. Still pictures with sound are now becoming more common with the increasing popularity of record/filmstrip systems and slide/tape systems.

Many institutions have found 35mm colour slides an excellent aid in art and architecture classes. (Series of transparencies have also been developed for instructional use in such fields as physics, chemistry, mathematics, engineering drafting, and communications classes).

Not to be overlooked is that simple machine which even non-mechanically inclined teachers find relatively easy to use — the overhead projector. Diagrams and graphs are projected on the sceen with ease and those erasable acetate sheets make the use of the overhead projector not

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[5] Schramm, p. 47.

TABLE 1
EXAMPLES OF LEARNING FROM INSTRUCTIONAL FILMS[6]

Author	Study	Results
Ash & Carlson (1961)	Military subjects assigned randomly to groups, one of which saw films on military topics, the other did not.	Exposure to the training films doubled the learning of the experimental group as compared to controls.
Hovland, Lumsdaine, Sheffeld (1949)	Very large samples of military subjects tested on learning from three films designed to implant attitudes and information about World War II.	Experimental groups averaged about 50% higher, on post-tests, than controls who had not seen the films.
Neu (1951)	Very large samples of army recruits separated into experimental and control groups, the former being shown a training film.	Mean learning scores of experimental groups between one and two standardized deviations higher than controls.
Wise (1932)	Motion pictures used as a supplement to high school course in American history for one class, not for another.	Adding the films raised learning scores of experimentals over that of controls by a critical ratio of 2.00.
Vandemeer	Some engine lathe operators taught with aid of films, others with aid of demonstrations.	Those who saw films able to complete jobs at significantly faster rate and had fewer products rejected.
Gagne and Gropper (1965)	Study of effectiveness of filmed review materials	Filmed materials responsible for highly significant gains over no review.
Wittich (1959)	Incidental information on teachers in 83 high schools, in whose classes the Harvey White physics films were shown.	Teachers (as well as students) gained significant amount of additional information about physics from the films shown to the students.

only convenient but also economical. One example of the versatility of the overhead projector comes from the University of Pittsburgh where an English teacher has drawn up an effective way of teaching English with the help of the projector. As part of this plan, selected passages from novels, essays, poems, and students' themes are projected on the screen and underscored or corrected by means of a grease pencil in full view of the class. And if, for example, the professor wants to highlight the importance of verbs (in good writing in the English language), he can project on the screen a paragraph from Faulkner in which verbs are polarized so that they shine out in a brilliant white light while the other words of the paragraph appear in a sombre blue.

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[6] Schramm, p. 52.

1.4 Computer-assisted Instruction

Computers have been used for some time now by universities, principally for administrative purposes and for research.

Increasingly, computers are now being utilized as an important and promising vehicle for teaching-learning. McKenzie mentions two main types of potential use of computers in the teaching-learning process: (1) those which are essentially similar to already existing applications, and (2) those which are dependent for their realization on the development of new techniques.[7] The former is primarily concerned with making available to the students facilities for computation and data processing. The latter's potential is seriously hampered by our still very limited knowledge of how people learn.

The accessibility to students of computers for high speed computation and data processing can have very far-reaching effects on the curricula. Many courses will now be able to make use of complex problems involving computations since the students can now concentrate on the main principles without being distracted or slowed down by routine computational tasks. Computers will also enable many faculty members to use *simulations* more extensively. The famous Capsburg project can now be easily replicated and its judicious and imaginative use can make much more effective such studies as urban and environmental planning and design.

Some independent study programmes (ISP) are now using computer-assisted instruction (CAI) or computer-assisted learning (CAL) more and more. For example, at Ohio State University College of Medicine, the computer-based Tutorial Evaluation System (TES) has been found very effective in assisting medical students to evaluate their own progress.[8]

Computers need not be of interest only to the so-called "educational futurist". CAI has already been subjected to considerable research and the results have been favourable.

Schramm, for example, gives us the following examples of CAI learning:

TABLE 2
EXAMPLES OF LEARNING FROM COMPUTER-ASSISTED INSTRUCTION[9]

Author	Study	Results
Atkinson (1968)	First grade students given 20 minutes tutorial daily in reading on CAI terminal. Meanwhile control group received similar tutorial in Mathematics.	Nine of 10 comparisons on standardized post-test scores, significantly favourable to experimental groups.

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[7] N. McKenzie, et al., *Teaching and Learning, An Introduction to New Methods and Resources in Higher Education*, Paris: UNESCO & the International Association of Universities, 1970, p. 62.

[8] J.V. Griesen, "Study of an Independent Study Program", *College Management*, January, 1974, pp. 30-32.

[9] Schramm, pp. 53-54.

Author	Study	Results
Suppes and Morningstar	Large samples of 1st through 6th grade students in Mississippi schools and 3rd through 6th grade students in California schools given 10 minutes of drill per day, on CAI terminal, in arithmetic.	Seven of 7 comparisons in Mississippi significantly in favour of experimental over control groups. Three of 7 in California significantly in favour of experimental groups, 1 in favour of controls, 2 n.s.d., one contaminated.
	Control groups 5 hours of classroom weekly in comprehension of written and spoken Russian replaced by comparable time at CAI terminals. Control group has regular classroom instruction, and both groups had language laboratory and homework.	73 per cent of CAI students finished year course, 32 per cent of controls. Average number of errors was lower for experimental group on all three quarterly tests, but significantly so for only 1 quarter.
Hansen, Dick, and Lippert (1968)	Three groups of college physics students compared. Group (a) received bulk of instruction by CAI, (b) partly by CAI, partly in class, (c) classroom only.	Group (a) significantly higher on midterm and final tests. Other groups n.s.d.
Bitzer and Bourdreaux (1969)	144 nursing students taught maternity nursing and pharmacology by CAI.	Significant saving in time. One group finished material in 50 hours or less that required 84 hours in classroom.
Homeyer (1970)	CAI class compared with face-to-face class in advanced computer programming.	CAI students completed course in average of 13.75 hours, as compared with average of 24 hours for classroom group, and no significant difference in scores on tests of learning.
Adams (1969)	One hour a week of CAI in reading and writing German compared with one hour a week of language laboratory as supplement to three classroom hours of college German.	CAI students performed significantly better than others in tests of reading and writing German, insignificantly more poorly in listening and speaking the language.

Those who studied the relative effectiveness of computer-assisted instruction have consistently noted the ability of CAI to provide interactive drill and to save time over direct teaching. A study of Table 2 also reveals an interesting result of the Suppes and Morningstar report on teaching Russian by computer. Only 32 per cent of the classroom students, but 78 per cent of the CAI students, finished the year. Those who are interested in language teaching and learning may find something of value here. It seems that there is a distinct advantage in making it possible for language students to practise in their own time and with a carefully designed and interactive routine — things that conventional language laboratories cannot furnish.

For developing countries, perhaps the most serious obstacle to the extensive use of computers for teaching-learning is the high financial outlay they require. But even in some of our campuses here in Southeast Asia computers are already beginning to appear. And even if most of our institutions cannot afford to nave computer centres of their own, some of them may well consider the possibility of buying computer time. Terminals can be easily installed in campuses located in metropolitan areas where computers are already serving the government, business, and industry.

2. **Little Media**

It is interesting to note that the literature on the Little Media and their usefulness in the teaching-learning process is much less extensive than that on the Big Media. Part of the reason may be that the need to evaluate them did not seem particularly urgent. Moreover, there is little doubt that the Big Media are the glamour media and have attracted many more researchers to study them than the much less glamorous Little Media.

2.1 **Radio**

Much fewer research studies of the effectiveness of the radio as an educational tool exist compared with television. Schramm notes that the last extensive summary of research on radio as a tool for teaching-learning came out in 1950 in the Encyclopedia of Educational Research.[10] Table 3 is taken from Schramm's study on media and it indicates that students do learn from radio instruction.[11]

Although the research design of many of these studies of the teaching effectiveness of radio leaves much to be desired, the results indicate that at least radio compares favourably with conventional classroom teaching. A study by Spain in 1973 of the Mexican Radioprimaria also confirms that students taught with the help of radio at least did as well as those who were taught in the conventional classroom.[12]

It may be noted that in spite of the advent of television, radio seems to be holding its own even in the industrialized countries of the West. For example, in the U.S.A., Purdue University offers college courses by radio. In Australia, a radio-correspondence school begun in 1933 still offers 12 grades of instruction to children in remote parts of that continent. Some of these schools are now supplemented by the use of "Flying Doctor's" radio which permits radio contact by the pupil with the teacher and other students. In West Germany the "Funkkolleg" still operates. It is a radio school primarily intended for post-secondary adults who can earn state certificates in a number of the courses being offered.

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[10] Schramm, p. 57.

[11] *Ibid.*, p. 58.

[12] Schramm, p. 200.

TABLE 3
EXAMPLES OF LEARNING FROM INSTRUCTIONAL RADIO

Author	Study	Results
Constantine (1964)	Science taught by radio in elementary school	Students gained on the average 14 months, in one school year, on standardized test of scientific information and 15 months on standardized test of work study skill.
Heron and Ziebarth (1946)	Learning from radio lectures compared with that from classroom lectures by the same teachers in college-level psychology. Groups changed places half-way through the course.	n.s.d.
NHK (1956)	Japan Broadcasting Corporation used radio to teach English and music in 3rd, 5th, and 7th grades.	Reported learning gains in every case at or above level of conventionally taught classes.
Wisconsin Research Project in School Radio (1942)	12 elementary school classes that received 25 minutes weekly of radio teaching of music plus 40 minutes of classroom practice compared with 8 classes taught same material for 75 minutes weekly in classroom.	Radio classes significantly better in tests of ability to recognize note values, read at sight, and recognize rhythms; n.s.d. on ability to take musical dictation.
Xoomsai and Ratanamangala (1960)	Very large sample study of teaching of social studies by music in 2nd and 3rd grades, English language in 6th and 7th grades, of rural Thai schools, compared with control groups.	Experimental controls doubtful, but gains of radio groups reported as comparing very well with usual gains in those classes by conventionally taught students.
Lumley (1933)	High School students taught foreign languages with the aid of radio.	Pronunciation of students who heard radio lessons better than that of students who did not.

One of the most attractive features of the radio as a tool for teaching-learning is its relatively low cost compared with the Big Media. This, plus the widespread dispersion of transistor radios, should make educators and educational planners take a closer look at the lowly radio as one of the still most valuable aids we have in the teaching-learning process.

2.2 Programmed Instruction

As McKenzie notes, programmed instruction or programmed learning is "potentially one of the most confusing of recent innovations because it is difficult to define".[13] We need not go into the details of the difficulties that characterized every step of the development of programmed instruction. At the risk of oversimplification, we may mention the commonly accepted characteristics of programmed instruction as: (1) *continuous active student response*, (2) *an immediate knowledge of results*, and (3) *self-pacing*. The dynamics of programmed instruction are in many ways closely similar to that of a systems approach to instruction with its emphasis on definition of specific instructional objectives, developing lessons and materials designed to achieve these objectives, and determining how well (or how poorly) the objectives were achieved and continually improving the course to improve the results. And McKeachie is right, I believe, in saying that programmed instruction is "in essence, simply careful, systematic educational planning".[14]

The technology of programmed instruction range from programme textbooks to sophisticated teaching machines. The programmed textbook is basically an instructional book designed for student use following the learning-in-small-steps sequence of the teaching machine. The teaching machine presents questions in a predetermined sequence to the student. One of its most attractive features is that it gives the active learner immediate feedback. Another advantage of the teaching machine is that it permits the student to proceed at his own rate.

McKeachie points out that there have been two principal aproaches to the use of teaching machines. The first approach, represented by Pressey's early work, employed the teaching machine principally as a device to acquire immediate feedback from conventional procedures. In other words it was used basically as a *testing* machine to be used as a supplement to conventional instruction methods such as lectures, class discussions, etc. The second approach (introduced by F.B. Skinner and Company) went beyond using the teaching machine as merely a testing machine. They used it as a teaching machine not just in name but in reality. In this approach it was used either as the sole instrument of instruction or as the principal method to be supplemented by the teacher.[15]

Schramm has listed a number of studies on the effectiveness of programmed instruction. These are given in Table 6.[16]

The studies included in Table 4 indicate that programmed instruction is at least as effective as conventional classroom teaching. Sometimes more effective than classroom learning only. The use of teaching machines as supplements to conventional instruction has been found to be effective by Angell, Peterson and Stephens.[17]

One of the more spectacular results of programmed instruction was reported by Markle in 1967. Markle succeeded in reducing by 25 per cent the time required for the completion of a first aid course by empirical pretesting and revision of instructional materials. In addition, Markle was able to increase the final test score from 145 to 270 for a group taught with his new materials. Another reported result of this study was the reduction of the

[13] McKenzie, p. 63

[14] W.J. McKeachie, "Research in Teaching: The Gap Between Theory and Practice", in Calvin B.T. Lee, ed., *Improving College Teaching*, Washington, D.C.: American Council on Education, 1967, p. 223.

[15] *Ibid.*, p. 221

[16] Schramm, p. 51

[17] McKeachie, p. 221.

standard deviation for the experimental group from 42 to 9! In this instance it can be claimed that programmed instruction not only improves performance but also equalizes it.'[18]

One final example of the application of programming to instruction may be given here. North Florida Junior College maintains a Programmed Learning Resource Center which currently serves four principal purposes: (1) *remedial instruction* especially in English and Mathematics, (2) making *self-instruction* courses available to students in a wide variety of fields, (3) offering *drill and*

TABLE 4

Author	Study	Results
Tanner (1966)	Groups of low achievers in 7th grade compared, with experimental group being taught arithmetic by programmed instruction, controls by classroom teacher.	n.s.d.
Bobier (1965)	12th grade students divided into experimental and control groups, to improve mathematical skills either by programmed instruction or programmed teaching.	n.s.d.
Doty and Doty (1964)	100 introductory psychology students studied programme on physiological psychology for two weeks outside class and the subject was not discussed in class.	Learning on achievement test correlated highly with students' GPA.
Attiyeh, Back, and Lumsden (1969)	Over 400 students in 48 colleges and universities studied a programmed text on introductory economics. Divided into three groups: (a) studied programme for period and attended no classes; (b) supplemented classroom teaching with programmed text; (c) classroom only.	Group (b) scored significantly higher than other groups. Group (a) significantly lower but insignificantly so than controls.
Ashford (1968)	Taught music theory by programmed text and compared with classroom teaching.	On recall test, three years later, students taught by programmed instruction did better than those taught in classroom.

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[18] Schramm, p. 57.

reinforcement experience, e.g. for shorthand or music, and (4) providing *enrichment programmes* in literature, music, art, etc. Like other learning resource centres in the United States, this centre places a lot of emphasis on audio-visual facilities.[19]

Although a fully-equipped learning resource centre may well be beyond our means at present, I thought the four purposes of the North Florida Junior College programme may give us new ideas for similar uses of whatever programmed materials we may have available on our campuses.

2.3 Inexpensive Printed Materials

The attention given to Big Media has also obscured the importance of the much less publicized revolution in the use of printed materials through inexpensive paperbacks, offprint copies of journal articles, xeroxed materials, etc. Not only can our libraries now acquire more inexpensive materials but our students also can now slowly build their own collection of important paperbacks.

Through these inexpensive materials, master teachers can now reach many more students at a much lower cost than either television or radio.

McKeachie reports that an early study found (that) students learned as thoroughly from reading certain materials as from listening to them.[20] It was also reported that more intelligent students profited more from reading than from lectures. Although little research has been done on the effectiveness of printed material as media for teaching learning, there is little doubt about the importance of this kind of Little Media for our educational work.

Do students learn from Little Media? Schramm has brought together some research on this question.[21]

It may be well to conclude this section of the present paper with a few observations. First, it may be noted that in spite of the proverbial conservatism of schools in general, many of the innovations in educational technology have already been accepted on many campuses throughout the world. The studies mentioned above that we have taken from Schramm's work indicate that Media, both Big and Little, help students to learn at least as well as ordinary classroom teaching.

> We can say, on the basis of this evidence, that students can learn from any medium. We cannot say they always *do* learn; that depends on the students, the conditions, and the teaching content of the medium. We cannot say that teaching by media is necessarily as effective as, or more effective than, conventional classroom teaching because it is almost impossible to measure all the outcomes of instruction. Most of the research studies measure achievement, defined in terms of criterion-reference or standardized tests. A few measure some of the affective results, and a few others measure time required to complete the work. But the total product of education is more than any of these; it is a changed person, with a set of values and abilities, a concept of culture and his place within it, and a living personality that governs his interaction with people and his internal life. No instructional research measures all that.[22]

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[19] B. L. Johnson, *Islands of Innovation Expanding: Changes in the Community College*, Beverly Hills, Ca.: Glencoe Press, 1969, p. 85.

[20] McKeachie, p. 221.

[21] Schramm, p. 59.

[22] Schramm, pp. 57-61.

TABLE 5

EXAMPLES OF LEARNING FROM LITTLE MEDIA

Author	Study	Results
Popham (1961)	Two sections of a graduate course in Education matched on aptitude and subject matter pretests; 1 section taught by lecture, the other by tape recordings of same lectures.	n.s.d
Menne, Klingenschmidt, and Nord (1969)	Recorded lectures from introductory university psychology course, and provided students who so wished with their own tape recorders and printed chalkboard notes, to work at their own pace. 209 students chose to study from tapes, 408 from live lectures.	Overall, n.s.d. Lowest quartile clear advantage for tape. Only 5 of 209 tape students dropped out of course, while 58 of 408 dropped out of lecture sections.
Eliot (1948)	Compared use of *taped* with live geography lessons in private secondary school.	Lower IQ students gained relatively more from tape.
Stein (1959)	Use of film loops as aid to learning typing.	Groups with access to film loops learned to type significantly faster than group without access to loops.
Chance (1960)	83 high school students divided into 4 groups at random; two teachers taught two classes, one with aid of *chalkboards*, one with *transparencies*.	Transparencies saved about five minutes per class period.
Dworkin and Holden (1960)	Compare 60 graduate students who saw four *filmstrips* with tape recorded *commentary* on atomic bonding, with similar groups taught conventionally.	n.s.d.

We may safely conclude that motivated students can learn from any medium if it is competently used and adapted to their needs. Whether students learn more from Big Media than from Little Media is difficult to answer. Schramm points out that the amount of learning derived through the use of the different media depends as much on *how* the medium is used as on *what* medium is used.

Those who are engaged in the difficult task of reforming their national educational system may be well advised not to overlook the usefulness and effectiveness of the Little Media. The temptation of "leap-frogging" over simple (and inexpensive) technologies to sophisticated (and usually more expensive) ones certainly needs to be examined in the light of what data we have on the relative effectiveness of the different innovations in educational technology that are now available to us.

PROGRAMMES FOR FACULTY TRAINING AND DEVELOPMENT

The innovations in educational technology that we have discussed in the first part of this paper require in varying degrees the services of competent teachers if these aids are to be effective. For us in Southeast Asia, at least, the newness and the formidable cost of many educational innovations still make us dependent on faculty members to do the bulk of our teaching. I seriously doubt whether we will ever reach a point where we can dispense entirely with the services of human teachers on our campuses.

As long as human teachers are needed on campus, the quality of the faculty will always remain one of the most important concerns of any college or university. There are many developments today that make the maintenance, not to mention the improvement, of high quality teaching difficult for Southeast Asian universities. First, there is the accelerating expansion of new knowledge that requires all faculty members to continually bring their teaching materials and methods up-to-date. Second, is the rapid increase in our student populations that in one way or another makes the already heavy load of our faculty members heavier still. Third, the spiralling inflation in which we all find ourselves makes it increasingly difficult for universities to keep their salaries competitive enough to retain their most talented teachers who can often obtain higher salaries in government, business, or industry. Another problem which some Southeast Asian universities have imported from the West is the relatively lower status teaching members of the faculty have in comparison with their colleagues who are engaged mostly in research.

In Southeast Asia as in other parts of the world there is deep dissatisfaction with the kind of teaching that goes on in university and college classrooms. Students complain about ill-prepared and ill-delivered lectures, outdated and outmoded curricula and syllabi, inept handling of classroom student-faculty interaction, etc. Administrators complain about the poor preparation for teaching that many new faculty members bring with them, lack of understanding of the ethics of the teaching profession, lack of workable hypotheses about the balance of freedom and responsibility which ought to be characteristic of university faculty members, etc. Senior faculty members complain about the deterioration of teaching quality in their departments, increasing concern for spectacular assignments and projects to the detriment of classroom teaching, lack of dedication, etc., in the younger members of the faculty.

Everybody seems to be unhappy with the quality of teaching and complains about it but like the English weather nobody (almost) does anything about it. What was said about the preparation of American college teachers twenty-six years ago remains substantially true today not only of the United States but, I am afraid, of most of our countries:

> The American college teacher is the only high-level professional man in the American scene who enters upon a career with neither the prerequisite trial of competence nor experience in the use of the tools of his profession.[23]

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[23] W. M. Wise, "Who Teaches the Teachers"? in *Improving College Teaching*, Washington, D.C.: American Council on Education, 1966, p. 86.

If, instead of the word American we substitute our own nationalities many of us may find the above quotation an accurate assessment of our colleagues in our respective countries.

It has been said that there are two basic reasons for the poor quality of college and university teaching throughout the world: (1) the neglect by employing colleges and universities of proper orientation and continued in-service training of their faculty members and (2) the failure of the graduate schools to give adequate attention to teaching preparation in their programme of studies. There seems to be a widely held assumption that the holding of a Ph. D. or some other graduate degrees automatically makes the graduate a competent teacher in his field.

W. Max Wise suggests that both the teacher training institutions (often the Graduate School) and the colleges agree to share the responsibility of preparing and inducting the new faculty member into the teaching profession. Moreover, he poses four questions that need to be asked with respect to the development of new programmes for the preparation of college level teachers:

1. Assuming that college teaching is largely an exercise in individual, if not idiosyncratic, professional behaviour, does the typical graduate programme of studies help the new teacher discover and develop a style of teaching that is likely to stimulate undergraduate students?
2. Does a typical programme of graduate studies provide sufficient perspective for the prospective college teacher to deal with the individual differences among students he will face, and does it provide an initial basis for understanding the range of motivations he will encounter in the students with whom he will work?
3. Does the content of the Ph. D. study in a discipline provide a sufficient basis for the prospective teacher to select subject matter appropriate to the courses he will teach, and does it prepare him for the intelligent exercise of his responsibilities as a member of a college faculty which must make decisions about purposes and procedures in the college?
4. Does a typical pattern of preparation for college teaching — the Ph. D. — prepare prospective teachers for the full and responsible exercise of freedom and initiative that is the distinguishing trait of the best college teachers?[24]

Two general approaches could be used to bring about improvement in the situation: (1) a more adequate preparation of college teachers, and (2) improvement of the teaching competence of current faculty members. With respect to the first, there are few systematic attempts to give an adequate formal preparation for prospective college faculty members. In the Philippines, there are programmes designed to train elementary and high school teachers. There are very few for the college level. One successful programme that I can recall was an effort to train teachers of college economics. Unfortunately, it was only a one shot deal. There are efforts by foundations and such agencies as the Fund for Assistance to Private Education (FAPE) to develop university teachers but these are pitifully few and poorly organized compared with similar programmes for the elementary and secondary levels.

But what is really needed is a conscious effort on the part of both the employing institutions and the teacher training institutions to agree that strong programmes for college teaching be set up. There are a few models that may be helpful in this task.

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[24] Wise, pp. 89-90.

1. *Teacher Preparation Programmes*

The history department of Washington University at St. Louis (USA) has developed a four-year Ph. D. programme designed to prepare teachers rather than research scholars. Most of the first year of the programme is spent in course work except that towards the end of the year the students visit discussion sections of history courses taught by members of the department. These visits are followed by discussions of teaching problems that are raised as a result of those visits. The summer between first and second year is devoted to preparation for actual teaching assignments for the following year. That summer session closes with a two-day seminar-conference on teaching and graduate preparation. During the second and third year of their programme, the students carry a limited teaching load of two courses under the supervision of senior faculty members of the department.

An evaluation of the foregoing programme said this in its interim report: "The pilot programme, which combines training in teaching, training in research and writing, and a rational plan of financing graduate study, has proved to be realistically conceived and deserves to be continued".[25]

Another model may be seen in new forms of teaching assistance-ships which were initiated by the Graduate School of Yale University. Here is the dean's description of that programme:

> The new Yale programme of teaching interns, . . . is based upon four propositions: First, the faculty has a responsibility to initiate the more promising graduate students into the art of teaching. Second, this is best done by providing graduate students with limited supervised teaching experience under the guidance of experienced faculty. Third, this experience must be viewed as an opportunity open to those of proven intellectual competence and teaching promise, rather than as a chore necessary for financial support. Fourth, there should be available to the student who wishes it, the wisdom of those who are wrestling with issues of higher education as teachers, researchers, and administrators.[26]

As a result of that programme, departments were reported to have shifted teaching assistantships from mere supervision of laboratory courses to more substantial initial teaching experience with responsibility for the discussion sections of the course. Perhaps more important than that was the increased willingness of senior professors to supervise the teaching assignments of the interns.

Still another model that may be of some help to those who are concerned with setting up faculty preparation programmes is the arrangement where a graduate student interrupts his studies for a year or so during which he teaches full-time in an undergraduate college. This has been tried in the United States and there seems to be no reason why it cannot be adapted to Southeast Asia. Besides the invaluable teaching experience that the student — teacher derives from this break in his academic programme, this practice also often renews his enthusiasm for finishing the degree. To maximize the benefit of this setup, the student should be given an opportunity to receive periodically relevant feedback on his performance from an experienced member of the department to which he is attached.

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[25] Wise, p. 93.

[26] Wise, pp. 93-94.

2. *In-service Faculty Development Programmes*

So far, the models we have considered were concerned with preparation for teaching. We shall now look at in-serivce alternatives whereby the employing university provides all the faculty members not only with a carefully planned and implemented orientation programme but also with a continuing opportunity to improve their teaching ability. This type of faculty development programme should have a twofold aim: (1) to introduce the teacher to new techniques and (2) to expand his repertoire of skills needed for effective teaching performance.

Faculty development programmes can take many forms — depending on the objectives the university wants to achieve through such a programme. Some institutions conduct seminar-workshops on pedagogical methods. Others set up an elaborate year-long programme under the supervision of at least a part-time director.

The *seminar-workshop* programme is quite popular for many reasons. It is inexpensive. It is usually conducted at weekends and is therefore not very time-consuming. It is relatively easy to plan and implement. If properly organized it can be effective especially if held at regular intervals. Every campus usually has a couple of master teachers who can be persuaded to share their teaching expertise with the other members of the teaching corps.

One university in the Philippines organized weekend "soirees" for the faculty members of the College of Liberal Arts. The various departments took turns in hosting the soirees and during these gatherings they discussed their mutual teaching problems and shared insights and solutions. One desirable side effect of these soirees was the perceptible increased cohesiveness of the faculty. It was a pleasant surprise to the members of a department to know that their next door neighbours also faced the same teaching problems as they did.

Still another university has a fairly well-organized faculty development programme which has two principal aspects: (1) academic upgrading of the faculty through studies for advanced degrees, and (2) regular weekend sessions on the various facets of classroom teaching. However, to the dismay of this university most of the faculty members whom it had sent for further studies subsequently left the university for positions elsewhere. Apparently this university overlooked the fact that faculty members sent on sabbaticals to obtain advanced degrees usually return to their home institution with expectations of higher salaries.

Whatever policy a university may choose with respect to faculty development, it must realize that the human components of the university structure wear out eventually and must be replaced. The recruitment and continuing formation of faculty members cannot be left to chance.

It may be helpful to conclude this portion of the paper with Wise's recommendations on how the colleges and universities can adequately discharge their responsibilities in inducting the new faculty member into his profession:

1. Assign reduced teaching loads to new and relatively inexperienced faculty during the first year or term.
2. Give selected senior members of the faculty responsibility for working with new members of the faculty.
3. Arrange cooperatively with other colleges for seminars and workshops to be conducted by outstanding teachers.

The task of faculty development is too important to leave to sporadic, unsystematic response. I can think of very few better and more sensible ways of expending the institution's limited resources than on the development of competent and dedicated teachers.

ALTERNATIVES FOR THE OPTIMIZATION OF THE TEACHING-LEARNING PROCESS

This third and last portion of the paper will discuss briefly some alternatives for the optimization of the teaching-learning processes in Southeast Asian universitives. In a sense this part has already been touched upon, at least indirectly, in the two preceding sections. The discussions of innovations in educational technology and of programmes for faculty development have already suggested possible alternatives to optimize the teaching-learning process.

For this third part of our discussion, may I suggest that we group the alternatives to be considered around certain key problems: (1) too many students for our severely limited resources, (2) obsolete organizational structures, (3) poorly prepared students, and (4) poorly qualified administrators. This approach will hopefully give direction to our exploration of alternatives.

1. *Too many students*

Despite the wide differences that exist among Southeast Asian universities, one of their common problems is the rapidly increasing numbers of students that they are called upon to educate each year. And the end to this problem, in view of the still rapid population increase in our countries, is nowhere in sight. To make things worse, prospects of a corresponding increase in our resources are dim.

Because of its ability to reach many more students and because of its relatively light demands on university resources, as well as for historical reasons, *the lecture system* will be with us for a long time to come. In spite of its shortcomings, the lecture system has by no means out-lived its usefulness. Studies, such as those mentioned by McKeachie, indicate that lectures are effective for certain specific educational goals like the communication of facts or knowledge.[27] Gilbert Highet in his classic volume *The Art of Teaching* has dwelt at length on what can be done to make lecturers more effective. Among other things, he suggests that lectures should be well-prepared and well-delivered.

But what do we mean by a well-prepared and delivered lecture today? First of all, it seems to me, that a well-prepared lecture should assume a relatively new function. In view of the abundance and accessibility of printed materials, it is suggested that lectures should become the journals of the discipline or field of study. They should contain the latest important developments in the field which the ordinary student most probably has not yet heard about. Today's lectures, in other words, have to be *up-to-date*. The proverbial lectures notes, yellow with age, no matter how famous their authors may be, should no longer have an honoured place in today's university.

Another valid function of the well-prepared lecture today is that of introducing the student to a new field of study. A master teacher through his lectures can give new students a bird's eye view of the new discipline. A competently prepared lecture can whet the appetite of motivated students to explore in greater detail the still unfamiliar terrain of the new area of study. It may also be added that the lecture can give the new student guidelines for his reading and personal study.

A well-prepared and well-delivered lecture can be made still more effective if it is supplemented by: (1) group discussions, (2) multi-media, and

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[27] McKeachie, p. 216.

(3) written work. Large classes should be regularly broken up into small sections for discussion purposes. There are indications in the research studies done on the discussion method that it is effective in developing *critical thinking* and *articulateness*. This arrangement will require trained section leaders who may be either graduate students who are preparing for careers in college teaching or, if these are non-existent, at least the better students who have been trained by the professor for their function as section discussion leaders.

The use of multi-media can also enhance the effectiveness of the lecture system. The judicious use of media can relieve the monotony and boredom that are very real dangers in the lecture system. Secondly, as we have already mentioned earlier, reaching the student through both hearing and sight seems to be more effective than through either sight or hearing alone. Through media certain materials can be repeated as often as needed. Finally, media often permit greater flexibility in scheduling and programming.

Another supplement to the lecture system is written work. To be effective, however, written work must not only be carefully planned and implemented. In addition, it is vital that relevant feedback should be given to the student at regular intervals.

2. *Obsolete Organizational Structures*

As open systems, university structures should be continually evolving in response to new stresses or changes. Unfortunately, the time lag between the appearance of new changes and organizational response is generally too long. One study of the diffusion of educational innovation estimated that it generally takes about fifty years for an innovation to be institutionalized in education organizations.

In this context what alternatives are open to us? One possible alternative is the modification of the teaching-learning machinery that we have grown accustomed to. We take it for granted, for example, that anyone who is an expert in a particular discipline is *ipso facto* qualified to teach students in that discipline. Our departmental system is basically built on that assumption.

This departmental system is increasingly being questioned today. There are those who claim that the system is obsolescent. According to the critics of the existing departmental system, this setup originated towards the end of the last century when we knew very little about the learning process and so we assumed that the most competent teachers of a field of study are the scholars of that field. Today the reply is: "It ain't necessarily so".

What is the proposed alternative to the departmental system? One possibility is a new mechanism that brings the learning and curriculum development experts together with the experts in the different fields of learning for the purpose of designing new approaches to the teaching-learning of the various disciplines. The learning and curriculum experts in general contribute their know-how of the teaching-learning process in the most effective way possible. What the scholars contribute is the content of the course.

Some academic people may be revolted by the idea of having to work in collaboration with the "knowledge technicians". But many of us remember the frustration and disappointment that we felt after a few class sessions with an eminent authority in his field. The scholar did not know how to teach!

Under this proposed setup, a unit of teaching-learning experts is formed on campus and their specific function is to assist the faculty members of the different departments in designing their departmental course offerings. The hoped for result is not only a course that reflects the expertise of the scholars in the field but also the best that we know about teaching-learning. Obviously this brief description is an oversimplification that ignores many problems.

But the idea is worth thinking about.

Another target of the critics of the departmental system as we know it is this: It encourages and leads to the *excessive fragmentation* of the curriculum. One of the more valid complaints of the more thoughtful students nowadays is that there is no coherence in their programme of studies. They do not see how the different subjects required for a particular academic degree fit together. What they get is bits and pieces of information. And the situation is getting worse. Because of the knowledge explosion new courses come into being and so the fragmentation and specialization go on and on.

Even in small universities departments hardly talk to one another. Each department works out its syllabi and course offerings in splendid isolation. And the poor student is expected to absorb this absurd patchwork euphemistically called a programme or a course of studies!

Some institutions have recognized the need to reexamine the departmental setup. Proferred alternatives in this respect take many forms — from feeble exhortations to independent-minded departmental chairmen to be more interdisciplinary in their outlook, to real structural changes whereby departments are effectively grouped into faculties covering germane areas of study. For example, in one university, the College of Liberal Arts was reorganized in such a way that the different (and independent) departments were grouped into four faculties: The Faculty of Languages and Communication Arts, the Faculty of Thought and Culture, the Faculty of Behavioural and Social Sciences, and the Faculty of Natural and Theoretical Sciences. Each faculty is headed by a senior chairman elected by the chairmen of the departments of the Faculty. One of his most important duties is to see to it that the different departments which compose the Faculty draw up their syllabi and courses in close collaboration with each other, and to serve as a link with the senior chairmen of the three other Faculties. The hoped for result is a new coherence to the liberal arts curriculum.

Another alternative to the present departmental system is the reorganization of the curriculum around specific problems or constellations of problems that require the collaboration of the different fields of learning for their study and analysis. Thus, for example, a whole curriculum can be drawn up around ecology. The different sciences, from sociology, through economics, bio-chemistry, and on to philosophy and theology are all brought into this programme. The same can be done with almost any other problem area or focus of study. What is important is that there be a systematic and sustained effort to bring together in an intelligent and coherent manner the different disciplines that make up the building blocks of the programme of studies.

Speaking of obsolescent structures, the requirements for academic degrees also need to be reexamined. In many places, in order to earn a particular degree, the candidate must have so many units for his major, his minor field of concentration, electives, cognates, etc. One unintended result of the system is needless and wasteful repetition in the major area of concentration and sharp breaks in the other disciplines.

Another example of an obsolescent academic structure for which new alternatives must be sought is the *whole organizational structure* of the university itself. Many universities in Southeast Asia reflect the organizational structures of the universities in our former "mother-countries". That is why, for instance, Philippine colleges and universities bear a rather close resemblance to American institutions.

Structures, viewed from the theoretical framework we have chosen for our discussion, should reflect the organization's response to environmental demands as well as enable the organization to perform its tasks. Obsolete structures hinder rather than facilitate the performance of organizational tasks. Although the decision-making mechanism and the other administrative functions in the university do not, at first glance, touch the teaching-learning functions directly, their effects on the learning process cannot be overestimated. Surely the way resources are allocated in the course of the budgetary process, for example, must have important consequences both for the faculty and the students.

That is why our discussion of alternatives for the optimization of the teaching-learning process must also touch on the search for the kind of decision-making and management structures suited to the new realities in which we find ourselves today. In a sense, the optimization of the teaching-learning process requires the optimization of the *management* of the university, and the search for better alternatives in the teaching-learning process must include a search for better alternatives in the way our institutions are managed.

The organizational structure of our universities needs a very close and careful study. In many instances it has become too cumbersome for the changing times in which the university must operate. Most existing structures are more the accretion of *ad hoc* responses to *ad hoc* problems rather than the result of rational planning. We need to explore and experiment with new forms of governance and decision-making. We need to learn to use with discretion and courage the new management tools that are already available to us.

At Xavier University, our Institute for the Development of Educational Administrators (IDEA) tries to introduce to our administrator-students some of the management techniques that have come out of the National Center for Higher Educational Management Systems at Boulder, Colorado, in the United States. We try to give future college and university administrators enrolled in the IDEA programme an introduction to the basics of institutional planning, financial management and control, human behaviour in organizations, etc. Our purpose is not to minimize the influence of the faculty but to maximize the faculty's impact on the students through modern management. This point is worth stressing because some faculty members view the professionalization of the university administrators with dismay, fearing that this will lead to greater control by the administration of the academic operations of the university and consequently a weakening of faculty influence. The basic purpose of administration is *ancillary* to the task of teaching-learning, research, and the other functions of the university. Faculty members should realize that the many modern management tools now being introduced in academic management can strengthen rather than diminish their role on campus.

3. *Poorly Prepared Students*

There is hardly a faculty member or administrator today who does not complain about poorly prepared students. Time does not allow us even a most cursory exploration of the causes of this phenomenon. Certainly one would expect that the rapid increase of the student population is steadily imposing heavier burdens on an already overburdened and vastly outnumbered faculty. Not surprisingly, one result has been the steady deterioration of the quality of teaching on all levels.

Alternatives that may be worth considering are: (1) limiting access to higher education through a system of national examinations, raising entrance requirements, etc., (2) lowering of standards of academic performance, (3) strengthening the primary and secondary levels.

Some countries have tried to keep poorly prepared students from college by requiring every applicant to pass a national college entrance examination. Politically, this is a rather unpopular policy and opponents of this kind of legislation point out that it is grossly unfair to consign large segments of the population to a life of manual labour simply because they have failed in one examination. On the other hand, there are those who hold that there is no such thing as an absolute right to higher education. Where resources are severely limited the government has the right to limit access to higher education admitting only those who give solid hope that the resources expended on them will be wisely spent. But no matter what the national policy regarding access to higher education may be, the university should evolve a carefully planned policy of admissions. The kind of inputs an organization accepts determine to a significant extent what kind of products it will turn out.

Some may be shocked by even the mere mention of the alternative of lowering standards which they feel are far too low already. And yet a decade ago, a perceptive and informed scholar advised Southeast Asian universities to do just that: "One fetish that could well be questioned is that of being up-to-date in undergraduate work. We must examine carefully what is the purpose of trying to include the most recent knowledge".[28]

Silcock hinted that attempting to do *fewer* things with available local resources and tools but doing them *extremely well* will in the long run be more beneficial than attempting to be as up-to-date and as sophisticated and complete as the universities in the affluent industrialized countries of the West. He warned: "It is well-known that imitation of the practices of more developed countries can actually check economic growth in an economically underdeveloped country".[29]. The implication is that this can also hold true of education. He adds:

> It is important that people should have a frontier of knowledge to explore and a sense of doing the best that they can in their own situation. But it is not important that the knowledge they win should be useful to scholars in richer countries elsewhere... The important thing is that the methods taught in honours work and applied in research should be related to local professional and teaching needs and available local resources, and no scorn should be poured on such work because it may be unrelated to the frontiers of world knowledge. The aim should be to lead undergraduates to a local frontier of exploration, using available resources and recognizing the scarcity of both learned journals and skilled manpower, and to give them self-confidence in exploring locally, even if their results would not be fit to publish in London or Paris. Their duty is not to help London or Paris; it is to explore, develop, educate and (above all) care for, Mindanao or Chieng Mai.[30]

The last alternative in this section, namely, strengthening the primary and secondary levels, is usually beyond the power of the university. But as long as the lower levels do a poor job the university will be faced with poorly prepared freshmen each year and precious time will have to be set aside for remedial work.

4. *Poorly Prepared Administrators*

Until fairly recently, it was believed that with a little bit of luck and not

[28] T.H. Silcock, *Southeast Asian University: A Comparative Account of Some Development Problems*. Durham, North Carolina: Duke University Press, 1964, p. 127.

[29] *Ibid.*, p. 116.

[30] Silcock, p. 129.

much more intelligence, anyone could be an administrator in a college or university. While the notion of a faculty development programme has long been widely accepted, even if its implementation was often haphazard and sporadic, there was hardly anyone who gave serious thought to administrator development programmes. And yet when anything went seriously wrong with the university, it was usually the administrators who took the blame.

Perhaps there was much wisdom in the old practice of getting administrators from either the faculty ranks or from business and industry. But as the song goes — "the times, they are a-changing". Today it is finally being recognized that there is need to professionalize the college and university administrator. University management is getting far too complex to play by ear. The complexity of the university's operations and the swift changes that characterize the university's present environment demand a new breed of administrator: one who is at home with the values and traditions of academe and at the same time trained in the use of modern management tools.

It may surprise some that we should be talking about upgrading the quality of university administration and management while we are discussing alternatives to the optimization of the teaching-learning process. But only the most naive academician does not recognize the importance of sound administrative decisions to the university's teaching functions.

CONCLUDING REMARKS

In this discussion we have tried to focus our attention on three topics: (1) a brief review of some innovations in educational technology, (2) a cursory glance at some programmes for faculty training and development, and (3) a rather superficial exploration of some alternatives for the optimization of the teaching-learning process. We have tried to organize our thoughts within the theoretical framework of the university as an open system. As I mentioned at the beginning of this paper, this survey type of approach must of necessity be selective and superficial. Hopefully, we can fill in the *lacunae* during the discussion period.

Let me close these remarks by returning to Silcock's work that I mentioned earlier. He wrote: "Most modifications (of teaching methods) have been made reluctantly and under pressure, rather than in a spirit of experiment and adventure".[31] A spirit of experiment and adventure. That is perhaps what we need most of all in our request for better alternatives in our task of teaching-learning.

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[31] Silcock, p. 116.

DISCUSSIONS

Prapont Piyaratn

The following is presented as an example of the teaching-learning process which is being utilized by the Unit of Medical Education, Faculty of Medicine, Chulalongkorn University, Thailand for medical teachers' training courses.

At present, the Unit is engaged in promoting the development of teaching competence for teachers in health professions in order to solve the health problems of the country. It accepts, as one of the causes of the problems, the present inability of teachers to produce graduates with appropriate abilities to perform effective health care delivery to the community. To develop the needed competence in the health profession teachers, workshops have been planned and carried out regularly. The goal of these workshops at this initial phase of development is to inculcate in teachers the appropriate attitudes towards systematic educational processes to produce graduates with necessary abilities to meet the needs of the community.

In general, systems approach is the essence of our approach to education. Each workshop is systemically planned and implemented, and basic concepts needed for the health profession teachers to carry out teaching-learning processes are studied.

In studying each concept, the teachers actively participate in problem-solving-oriented small and medium group discussions. This is to illustrate to them the active kind of learning as compared to the passive methods they are accustomed to. Independent study is also employed in order to develop concepts of self-learning and individualized instruction.

As the result of our activities, changes in teaching-learning processes in health profession schools in Thailand are becoming evident.

Chin Long Fay

I should like to focus my discussion on the following points:

Programmes for Faculty Training and Development

A programme of familiarization with the principles and practice of pedagogy and educational technology could be set up *prior* to the new lecturer taking up his duties in the university, polytechnic or college. (Example: The Singapore Polytechnic, I understand, has such a programme for its new academic staff. Staff of the Institute of Education, Singapore has assisted in conducting such programmes).

A second programme of familiarization could assume the form of regular staff seminars.

1. **Internal Staff Seminars**

   More experienced staff could pass on their knowledge or demonstrate their pedagogical skills to their less experienced colleagues through seminar and workshop sessions.

   (Example: The Singapore Institute of Education has held several staff seminars since its establishment in 1973. The most recent one, held on 14 November 1975, had as its theme "Teaching Practice Supervision: Focus on the Teaching of Mathematics, Science and Languages").

2. **Inter-Institutional Seminars**

   The university and an Institute/College of Education could jointly organize seminars on topics of common professional concern. (Example: In November 1974, the Singapore Institute of Education organized a three-day seminar on "The Principles and Practice of Educational Measurement" for its own staff as well as staff of the University of Singapore. Over 60 university staff and 100 Institute staff participated).

A third kind of programme could be in-service courses conducted for the novice lecturer during his first year of service. Such courses should be a joint effort concerned with both content (i.e. academic subject) and method (i.e. pedagogy) and having lecturers from both fields.

A fourth kind of programme could be the relatively short-term attachment of lecturers to universities/institutions at home or abroad which have innovative teaching programmes or methodologies. The attachment would enable the lecturer to observe and study such programmes, and the lecturer should be obliged, upon his return, to apply this new knowledge to his own situations.

(Examples of educational/instruction innovations: auto-tutorial laboratories, computer-assisted instruction and evaluation, closed circuit T.V. instruction).

Alternatives for Optimization of Teaching-Learning Processes

Innovative teaching behaviour should be positively reinforced. In other words, teaching ability should be a criterion for appointment and promotion. (In Ohio State University, annual awards for Excellence in Teaching are given to its acadmic staff)

There is a need for student assessment of the way courses are taught. On the whole university and college students are mature enough to give frank and fair assessments of their courses and the teaching abilities of their lecturers.

Conversely, lecturers could constantly and consciously evaluate their own teaching performance and strive to improve (video-tapes can help immensely).

Lecturers would benefit from the opportunity to alternate between the lecture-room and other work places (outside the university), the better to see themselves in perspective as educators. This kind of alternation between the academic and the "real" world would make university teaching more relevant to societal needs.

There is need for universities to encourage the use of a variety of evaluation techniques. Besides the traditional three-hour essay examination, lecturers should be able to use other evaluation methods, e.g. term-papers, project reports, open-book examinations, oral examinations, etc.

There is need to make more use of formative evaluation. The results of evaluation should be used not only to provide feedback to students about their progress, but also to improve teaching.

There is need for universities to have a Resource-cum-Service Centre for Educational Technology, and for lecture-rooms to be adequately equipped with basic audio-visual aids such as the overhead projector and screen.

PART 2
GROUP DISCUSSIONS

Group A

NATIONAL DEVELOPMENT AND OPTIMIZATION OF TEACHING-LEARNING PROCESSES

Members

Makaminan Makagiansar, Abdul Rahman bin Arshad, Abdul Razak bin Abdul Ghani, Gwee Yee Hean, Chetana Nagavajara, Jane Harris, Tan Tiong Hong, Khamis alias Amir bin Awang, E.A. Afendras (Rapporteur)

Purpose

1. To identify environmental changes brought about by developments in science and technology, in economic and political affairs, and in demographic and social sciences.
2. To isolate the challenges of the environmental dynamics, and in particular the needs and requirements of national development in respect of higher education.
3. To discuss new concepts in teaching-learning processes in higher education in Southeast Asia in view of the new realities.
4. To suggest ways to optimize the results of teaching-learning processes.

Summary of Discussion

The possibility of developing meaningful generalizations of a truly regional vision and plan of action, was repeatedly questioned, since so many profound differences existed between the participating countries.

The first effort of identifying salient environmental changes started with the awareness that such changes are not necessarily brought about in a simple linearity by science, technology, politics, economics, etc., but in an interactive way. Furthermore, changes may be new or newly diagnosed because of advances in the various disciplines of science.

In the area of impact of science and technology, it was noted that there is a specific effect of improved communication in accelerating contact both geographically and socially, in contributing to the rising expectations which are sometimes so general as to be national aspirations, and often in contributing to rising frustrations in the populace. Communication, specifically transportation, certainly affects the demographic make up of the environment, it changes the rural/urban distribution of the people, it even changes the very concepts of rural and urban. Urbanization as well as other types of migration remind us of further features of the urban landscape, e.g. crime, anomie, suicide, lack of shelter and inadequate food, alienation, unemployment, unmet expectations, etc. Another environmental change due to the application of science and technology is the deterioration of the physical environment, e.g. deforestation, pollution, etc. These developments present challenges to higher education in respect of the adjustment to environmental changes and the improvement of the environment itself.

In regard to economy, the main focus of the discussion was on the issues of national development and foreign investment. In national development, especially rural development, it was noted that there was need for a holistic approach, particularly in view of the commonly observable adverse side-effects. There was some discussion of the international economic situation and the attitudes of the populace to foreign economic influence in the internal market, as for instance by extensive imports and massive investments.

The changes in the political situation in Indochina were discussed in relation to the political landscape of the region. The intensified efforts for regional political, economical and other cooperation between the Asean nations were noted.

After scanning the environmental changes, the subjects of the next discussion were the changes in higher education itself. One question posed was, how can higher education cope with the changing values, which are intimately linked with the changes in the environment.

Regarding the input to higher education, the discussion was centred on the recruitment of students and faculty. It was observed that access to higher education may radically alter the socio-economic profile of students and faculty. Changes in the policies controlling student recruitment may have some implied effects on the academic standards and the meritocratic systems of selection and advancement in the universities.

An important change in the academic environment was noted in the student-faculty relationship. Lowering of average faculty age has brought the members of faculty closer to their students and cannot but affect the tone and content of their dialogue. Moreover, the changing traits of faculty members are not only due to the broadening of the demographic base but also reflect their own educational socialization.

One important issue was the academic preparedness of both students and faculty. A major challenge was identified in the present lack of locally sensitive and pertinent educational materials. The language problem was raised; in the drive to enhance the position of national languages and to use them as media of instruction in higher education, both the development of the national language and the availability of competent faculty pose a challenge to the higher education system.

Another important issue was the system of contacts and linkages between higher education institutions and the community, especially rural communities. Various programmes, e.g. study-service, work-study, service-learning programmes, in the participating countries were examined. Such programmes offer a significant contribution to the well-being of the community, provide a valuable educative experience to the participants, and also have helped to bring about re-examination and subsequent changes of curricula in higher education to meet the demands of the community.

Regarding the output of higher education it was observed that the differences in the quality of graduates from various institutions in a country (differences that may be real or imagined), the consequent differential prestige in the eyes of the hiring public, and the graduate reception by the community in general, all have tangible implications for the employment of the graduates.

Major needs were noted in regional cooperation for staff training and institutional development. SEAMEO's present efforts in this direction, e.g. in the establishments of RELC, TROPMED, INNOTECH, BIOTROP, etc., were favourably mentioned as examples.

Recommendations

1. Curriculum development. Balance should be maintained between the generalized and specialized aspects of education; development of new disciplines and multi-disciplinary activities which are relevant to the needs of the society should be encouraged; there is a need to translate the new concepts of lifelong education, open universities, etc. into the local context.
2. Teaching methodology. There is an increasing need for field work and practical experience, for possible applications of new educational technology, and for the development of better evaluation systems rather than examinations.
3. Environmental changes must always be taken into account in the

planning and management of higher education.

4. Appropriate machinery can be set up by RIHED for study at the institutional or other level.

Group B

HIGHER EDUCATION INSTITUTIONS AND OPTIMIZATION OF TEACHING – LEARNING PROCESSES

Members

D.A. Tisna Amidjaja, Syed Abdullah bin Syed Yahya, Saneh Chamarik, John F. Brohm, G. Vadiveloo, Wichit Srisa-an, A. Amiruddin, Tunku Ismail bin Tunku Mohd. Jewa, the late Yaakub Abdullah (Rapporteur)

Purpose

1. To identify the changes in the concept of higher learning in the Southeast Asian context.
2. To study the response of higher education institutions to environmental changes.
3. To study the performance of higher education institutions.
4. To search for ways of reorganizing higher education institutions to optimize the teaching-learning processes.

Summary of Discussion

The term "higher learning" would have to be defined more sharply, in qualitative terms rather than quantitative terms of years, but it was agreed to accept the Unesco definition — "education provided by institutions which offer at least two years of study beyond the standard secondary school of the country" — as a working definition for the group discussion.

The present time is a period of a kind of "decolonization" as far as the universities in Southeast Asia are concerned. They are moving away more and more from western influences and styles and are searching for a more indigenous form and content. It is important at this stage of development that relevant policies and programmes be implemented.

The question was asked whether universities should respond to the national objectives as set out by the governments. If universities are to be relevant to society, they must be sensitive not only to what they themselves want to do but also to what the environment wants. In this respect, the freedom of the university becomes limited; the university does not stand isolated from the society around it, but is part of the society and must cooperate in the work of society. The question was asked whether the university as a social institution should serve as an agent of change. It was suggested that this was very much the role of the university in the new social order. The university should not only wait on the "word from the top" but should take an active part in the forming of national objectives. The university should provide a social conscience within society. It was suggested that the concept of the university as an instrument or tool in the hands of the government was not the best way to describe the situation. It would be preferable to put the stress on the university as a social institution, a social instrument.

On the question of academic freedom within the university, it was agreed that by and large there is still a good deal of freedom, and universities on the whole are not controlled by the governments. The question of control is a relative one; just as freedom is never absolute, so some measure of control will always be needed. In developing countries where efficiency in the use of available resources is imperative, perhaps more control is needed than in developed countries.

It was ventured that in the future, Southeast Asian universities would be problem-centred. In this context a close cooperation between universities and society was seen to be necessary. It was suggested that students could participate in developing problem-centred programmes by independent study or cooperative participation in work-study schemes.

In countries where finance and manpower are scarce, it is imperative to utilize these resources efficiently and effectively. The fullest use of resources could be achieved by the development of non-formal education, continuing education, pre-university courses, etc., besides the regular curricular activities. Brief "sub-degree" programmes related to local needs could well be introduced in rural areas. Other bodies external to the university could be involved in these programmes, thus opening up the university more to society. It was noted that the development of non-formal and continuing education would entail greater demand on the capacity of staff and facilities. If the staff is to be able to conduct research properly, teaching loads must be kept to a reasonable amount. Fifteen hours teaching was considered far too much, a load in the vicinity of six to ten hours being considered to be more conducive to research.

In order to conduct education and research properly, libraries must be kept up to date and must put emphasis on areas of study that are relevant to the particular region. It was observed that such libraries are often lacking today. This seems to be one area where institutions can improve their performance and respond to need. Many students do not have the habit of wanting to explore on their own, or if they have the desire to, they do not know how to. Most information has come to the students through the teaching process and they do not have enough direct access to the sources. It was pointed out that the lack of library resources if often related to the attitude and motivation of the staff members. The habit of reading for enjoyment has to be instilled early in the education process and should be begun in the lower levels of education. This matter should be stressed as more materials become available. At the level of tertiary education there are still too many students who depend too much on staff and tend to absorb their attitudes almost automatically. The recruitment of innovative librarians was imperative if library facilities were to meet the needs of research opportunities. The librarians should understand the needs of the society and its problems, so that the choice of books and the arrangement of materials would be a relevant one. This too could be related to the introduction of information centres, where relevant information could be disseminated to the people. These centres would not always be located within the universities. The need had been recognized and steps had been taken to write and translate teaching materials which are adapted to local needs and conditions.

The importance of the role of the Rector or Vice-Chancellor was stressed. In many cases the "spirit" or "atmosphere" that prevails within an institution depends very much on the man at the top. In institutions where an atmosphere of discussion and criticism is found, there is always a danger that the campus may become a political battleground. Where this has happened, it is invariably the case that outside influences have been at work. The Rector or Vice-Chancellor must be able to keep a certain control both within the campus and in respect to influences that may come into the campus from the outside.

In connection with the question of student participation, the matter of student demonstrations was brought up. Here again the role of Rector or Vice-Chancellor was seen to be a key one, one of whose important functions was to keep the lines of communication open between students and administration. Student participation would seem to be possible in three sectors, i.e. the teaching-learning process, the decision-making process, and the establishment of the new social order. The first two are internal to the university and the last is external. Responsible participation in the first two seems to be desirable, the third presents more problems and in this case energy must be channeled for constructive and not destructive purposes.

In the teaching-learning processes one of the contributions of the students is feedback so that the educational processes can be monitored and output can be improved. The actual mechanics of this present a challenge. It was observed that each country seems to be approaching this challenge in its own particular style, dependent on the circumstances existing in each country. The manner of assigning responsibilities to students, the manner of seeking feedback, the focus on direct and indirect involvement seems to be determined by the various emphases given in each country. It may be necessary for the Rector to educate his staff towards appreciating and accepting student participation in the form of feedback. Many staff do not like to have their lectures or tutorials criticized. Feedback can be looked at in a more constructive way if it is handled in the context of curriculum development.

The role of liaison officer seemed to be important in the present higher education scene. It was suggested that a great deal of unrest and trouble can be averted by wise discussion between the administration and the student body. If there is no liaison officer, then this must be done by the Rector or Vice-Chancellor himself.

It was pointed out that universities were founded as agents of change in western civilization, their aim being to train an elite of scholars. This concept of "elitism" remains today in universities in Southeast Asia but with a different meaning. By its very nature, the university produces an elite. In Southeast Asia care must be taken that the right kind of elite is produced. A clear distinction must be made between elitism as an input to the system and elitism as an output from the system. If elitism conditions the input to the system, then there could be danger of producing a very static, conservative elite. If only those who are privileged get the chance of higher education then the system is stagnant. From the point of view of output, elitism cannot be avoided. It was noted that entrance examinations do not always succeed in measuring the potential of the student, in many cases merely giving advantage to those who can afford the best schools. A quota system could be more equitable, and there should be equal opportunity for higher education.

Recommendations

1. A balance between the three major functions of higher education, i.e. education, research and public service, must be maintained in allocating time, finance and manpower resources to these functions.
2. Higher education should be relevant to the needs of society. To improve cost-effectiveness, universities should develop innovative programmes, e.g. non-formal education, extention programmes, etc.
3. Teaching methodology and educational facilities should be improved to increase the efficiency of learning processes, e.g. by improving library facilities, developing new educational technologies, employing better evaluation systems, etc.
4. Student involvement in teaching-learning processes provides feedback for the improvement of the educational process and output.
5. A conceptual change would have to be brought about in peoples' minds regarding the status of degrees and diplomas.

Group C

UNIVERSITY STUDENTS, UNIVERSITY TEACHERS, AND OPTIMIZATION OF TEACHING-LEARNING PROCESSES

Members

Prajudi Atmosudirdjo, Willi Toisuta, Hulman Sinaga, Mohd. Zain bin Omar, Seah Chee Meow, Nuanpen Wichiarajote, Pradit Wichaiyadit, Zainal bin Datuk Ghani (Rapporteur)

Purpose

1. To study the changes in the student characteristics, e.g. social backgrounds, expectations, attitudes, environments, etc.
2. To study the learning practices and experience of university students.
3. To discuss new concepts in teaching-learning processes in higher education in Southeast Asia.
4. To suggest ways to optimize the results of teaching-learning processes.

Summary of Discussion

In view of the basic differences in the educational policies and structures of the countries represented, it was a difficult task to present a generalized profile of university teachers and students. Student characteristics such as expectations and attitudes will differ in different countries as these will be influenced by the culture, ideology and economy of the different countries. If there is one point of similarity, it is the increasing numbers of students from a wider range of socio-economic backgrounds enrolled in the universities of these countries.

This varied background of students could be a serious problem, in that these students will bring into the universities a wide range of values, attitudes, aspirations and expectations which could be different and even in conflict with those held by the administration and the teaching staff of the universities.

It was noted that the students of today tend to be more pragmatic or realistic, especially in their choice of courses. Their choices are often influenced not only by the increased social status accorded to them after qualifying, but also by economic considerations and rewards.

With the increased competition for places in higher education,the students tend to be more competitive and perhaps more studious on the whole. They are primarily concerned with their survival and success in the system.

With the expansion of higher education and the introduction of local languages as media of instruction, the numbers of local academics in the universities have increased. In most universities the core of local staff are young and usually drawn from recent graduates. Consequently they have little experience in either university teaching or administration. More and more of these younger graduates are moving into areas of responsibility in both the teaching and the administration of the universities. They have in general better academic qualifications, but on the other hand, little or no teaching qualification or experience.

There are two main areas in which problems could arise. The first is the relationship between the younger staff and the older more established staff. With the increase of younger staff, there is perhaps a closer identification between them and their students. These staff members may be more likely to reflect the aspirations, values and expectations of their students which may be in conflict with those of the administration and senior staff. The second problem area is the teaching-learning situation where the staff is lacking in teaching qualification and experience.

Recommendations

1. Resource facilities for staff. Different types of resources, such as educational technology services, need to be established within the universities and the use of these facilities needs to be encouraged.
2. Decrease in student: staff ratio. The identification of the younger staff members with the students can be utilized by emphasizing small group teaching. This of course, would require increased financing of the universities.
3. Provision of opportunities for continuous staff development. Here the universities could run in-service courses, and regular programmes of seminars and conference for their own staff members. Most university staff members are aware of the weaknesses on their own part and if approached properly will be willing to participate in such programmes.
4. Consolidation of local universities. In the larger countries with several universities, there should be some form of specialization for each university in order to pool resources, both human and material.
5. System of rewards for effective teaching. If an acceptable form of evaluating teaching competencies could be produced, then some system of rewards, such as awarding of tenure could be introduced.
6. Problem-oriented curriculum. If this could be introduced, it would assist in focussing the energies of students on the problems and realities of the society they live in. This would also make the university courses more relevant and useful to the individual as well as to the society at large.
7. Provision of work situation within the university programme. Work programmes would bring the students into contact with the realities of their society, and would heighten their awareness of its problems.

Group D

CURRICULUM DEVELOPMENT AND OPTIMIZATION OF TEACHING-LEARNING PROCESSES

Members

Partomo M. Alibazah, Hamdan Mansoer, Francis Wong Hoy Kee, Joan Lim, Ernesto O. Javier, Chin Long Fay, Prapont Piyaratn, Boey Chee Khiew, Hubert O. Brown (Rapporteur)

Purpose

1. To examine the needs and requirements of the changing environments and the incorporation of new concepts and orientation in higher education into the curriculum.
2. To examine innovations in curriculum development.
3. To formulate alternatives for the optimization of teaching-learning processes in Southeast Asian universities.

Summary of Discussion

The discussion began with an examination of the relation between curriculum and student activism. Participants noted a lack of adherence of students to traditional values, and a tendency to be radical in the pursuit of their ideals, which are sometimes at odds with the social realities. Student activism should be channeled into doing constructive things, and not disruptive activities; on the other hand, the danger of restrictive legislation was noted which by trying to control students might produce a generation unable to think individually or creatively.

What can the university do? Perhaps not too much, since it is the whole society that has the greatest influence upon a young person's behaviour. It is most important for the university to offer as examples and models, persons and institutions engaged in worthwhile activities that the students may join or imitate.

The group considered the problem of the relation between individual and national goals in connection with the curriculum. Part of the dissatisfaction of students may arise from the inability of the university to take into account the needs of individuals. Ideally there should be no conflict between the achievement of individual goals and the achievement of national goals. The problem is to make the goal of the individual consonant with the goal of national development.

University goals are often not clear. There is a need to visualize these goals, to make them operational, and to translate them into programmes and curricula.

Changes might have to be made in the education system itself. Education should be available to those desiring it throughout their lifetime. There should be opportunity for those who need to return to school for special reasons, such as in-service training or up-dating, to do so. The need for lifelong learning underlines the importance of continuing education programmes, adult education, and the like.

Concerning the proposal for a centre for the advancement of university teaching, it was generally agreed that such a centre would be useful. The proposed centre need not necessarily be directly associated with a department of education, because the problems and needs of university teaching are often quite different from those of a department of education. The centre should be multi-disciplinary, and oriented towards the needs and problems of the nation. All university departments should be represented in organizing and operating such a centre, so that the special problems and methods of teaching in all the various disciplines can be taken into account in the centre's programmes. It was suggested that the centre devote itself to effecting behavioural changes in the teaching of university lecturers, helping them realize that they need to learn teaching techniques in order to improve the effectiveness of the teaching-learning processes. Since the centre would stress new methods of teaching and new technologies of instruction, it would stimulate the creative abilities of participating lecturers. It is possible that only a few are in fact creative enough to think of alternatives to lecturing, and the efforts of the centre would be directed at helping them to improve.

There is also the problem of overloading the few talented teachers. In any one university, the educational technology unit has three responsibilities, i.e. teaching, service to the university, and service to the off-campus programmes and the personnel resources of the unit are frequently strained not only by university requirements, but by requests for special courses, etc. It was suggested that such centres should coopt the services of other interested persons. A plan was proposed which would identify persons from each department of the university who could become leaders in effecting instructional improvements, in cooperation with and with the support of the educational technology unit. This would relieve the unit of some of the total burden, and would draw upon the expertise of department members in applying educational technology to the particular demands of their own area of specialization.

Some members of the group noted some problems in the use of media such as films and videotapes, in particular the lack of human interaction between the instructor and students. This could in part be alleviated by producing better programmes, with more involvement, but it was felt there was a limit, since, for example even the best of videotapes cannot answer a spontaneous question. Another important consideration is the place of such media in the total instructional programme. There is no specific strategy which is best for all students, yet university instructors are often forced, because of large classes, to deal with students as if they were all alike.

The group considered the problem of the closer cooperation of universities in the Asean countries. It was the consensus of the group that there should be far more opportunities to exchange students and staff between the various universities in Asean. This would lead to beneficial educational effects, would foster solidarity and perhaps closer economic and cultural cooperation, and would generally promote understanding, peace, harmony, and friendship among the Asean countries. It would also further the dissemination of information regarding innovative programmes among the participating countries. It was further proposed that any projected centre for the advancement of university teaching should include a clearing house to process and distribute information about educational development in the different countries.

Recommendations

1. Higher education should be made available to those desiring it throughout their lifetime. There should be opportunity for those who need to return to school for special reasons, such as in-service training or up-dating, to do so. The need for lifelong learning underlines the importance of continuing education, adult education, etc.
2. In curriculum development and in the teaching-learning processes, we should strive to make the individual goal consonant with the goal of national development.
3. A centre for the advancement of university teaching would be useful to improve the effectiveness of the teaching-learning processes. The centre should devote itself to effecting behavioural changes in the teaching of university lecturers, and should stress new methods of teaching and technologies of instruction. The centre should also include a clearing house to process and distribute information about educational development in the countries of the region.
4. There should be more opportunities for exchange of students and staff between the various universities in the region.

PART 3

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

HIGHER EDUCATION AND NATIONAL DEVELOPMENT

Higher education is viewed as an integral part of national development. Higher education has three basic functions, i.e. education, research and service to the society. in performing these functions, higher education provides a means for the generation of high-level manpower who will be responsible to lead and to seek solutions to the increasingly sophisticated problems of national development; it also provides a means for the generation and dissemination of knowledge which has to be adapted to the needs of national development. These two factors, i.e. human investment and growth of knowledge, are the two most important factors in national development.

Several forces, external and internal to the universities, have accelerated the demands for more effective higher education. The increase in popular aspiration for higher education has caused a phenomenal increase in university enrolment. The world-wide development in science and technology has accelerated the need for disseminating and adapting the new knowledge. The acceptance of the modern idea that higher education should participate in national development has created demands for relevance of educational contents and outputs to the needs of national development. However, the inherently high inertia and the scarcity of resources have constrained higher education and have prevented it from responding fully to the new environmental and internal necessities. New approaches to teaching-learning processes have to be found in order to increase the effectiveness of higher education and thus enhance the contribution of higher education to national development.

DETERMINANTS AND CHARACTERISTICS OF HIGHER EDUCATION

There are four determinants relevant to the future development of higher education, i.e. enculturation, future orientation, adaptability and type of leadership. The lack of enculturation, i.e. the integration of culture heritage and higher education, may lead to domination by science and technology with loss of culture and purpose of life. A vision of the future is necessary, and short and intermediate range planning must prepare graduates to meet the long-term future. Human beings must be adaptable, and the learning process must give perspective and generate adaptable individuals who can interact with the changing and changed environment. As a nation develops, there are changes in the type of leadership required; these changing types of leadership must be identified, and higher education must be able to prepare the required potential leaders.

The desirable characteristics of a higher education system can be described as a system that: should be sensitive to social need and should pursue quality without compromise; should be accessible, diverse and flexible; should allow for transfers among institutions and programmes; should be equitable in its treatment of disadvantaged groups; and should be publicly accountable.

STUDENT PROFILES

The students enrolled in higher education come from a wide range of socio-economic background. This varied background of students will bring a wide rang of values, attitudes, aspirations and expectation into campus life. The proportion of female students will increase in the future with resulting social effects.

As future inputs of students became less elitist they might themselves stress community development. The students of today tend to be pragmatic and realistic, their choice of fields of study is often influenced not only by the resultant social status, but also by economic considerations and rewards. There is a danger in the overwhelming preference for fields of study which offer highly paid jobs. This preference will lead to lowered enrolment in the "dry" fields of study, e.g. science and humanities, which will create a university output mismatched to the needs of development.

CURRICULUM DEVELOPMENT

The social functions of higher education are the transmission of culture, the transmission of skills, transmission of values and beliefs, and preparation for working life.

Higher education should provide the link between the present and the future although the time-lag inherent in higher education must be noted. Higher education should be able to provide balance between the interests of national development and the aspirations of individuals for professional competence and career, between academic excellence and academic relevance, between theory and practice, between vocational education and the education of inquiring mind, between specialized education to obtain a tailor-made finished product and general education to obtain an adaptable nearly finished product.

Whereas existing curricula are disciplinary and are oriented towards book knowledge, the new curricula shall be multi-disciplinary and inter-disciplinary problem-oriented, and community based. Creativity and productivity should be encouraged.

There is a need to emphasize rural development in the developing countries in Southeast Asia. New graduates have the tendency to be attracted to urban environment. This leads to "brain drain" of educated manpower from the rural areas, where they are most needed, to the urban areas. Higher education should not reinforce the life style of urban elites, but it should nurture commitment for participation in rural and social development.

The concept of "Development Universities" was introduced in which the learning processes would be oriented toward the development tasks of the community and nation. The "Development Universities" would have social, economic and spiritual dimensions. The educational content and process would be resultants of the university's function as a catalyst in community development. The university would become actively involved in community development and re-socialization and five aspects of this process can be considered — survey, promotion of self-reliance, democratization, economic development, and education. An appropriate organizational structure is proposed whereby the necessary curriculum changes could be developed, implemented and evaluated.

A major challenge was identified in the present lack of locally sensitive and pertinent educational materials.

The universities in developing countries should consider the possibility of multiple entry and multiple culmination, and should look to the idea of the "flexible" graduate. To attain these objectives training via three "cycles" was suggested, the first cycle to have a large intake and a broad curriculum, the second cycle to provide professional training, and the third cycle to educate highly specialized professionals and scholars. A "sandwich" type learning path is advocated with as much openness and flexibility as possible.

It was felt that the widest possible spread of relevant education and opportunity was more important than an adherence to "international standards". The concepts of "lifelong education" and "the open university" received considerable support. Education is a continuous process, higher education is just one of the stages in lifelong learning. To this end universities should develop innovative programmes, e.g. extension education, recurrent education, non-formal education, etc.

TEACHING-LEARNING PROCESSES

Human learning concerns the whole person. Effective education is found when the learner is regarded as a person to be respected, nurtured, strengthened, and stimulated, rather than as merely an intellect to be trained. Higher education should attempt to embrace both the cognitive and the affective aspect of learning. The teaching process should be complemented by an educational environment which is conducive to the education of the whole person.

The problems of teaching-learning processes are discussed as arising from the following causes: too many students for the resources available, poorly prepared students, poorly prepared teachers, and obsolete methods and facilities, and obsolete organizational structures.

In the offering of information and instruction to the students, diverse methods should be considered. There is no "all-purpose" method of lecturing; more expert use of techniques should be experimented with in accordance with the various objectives. The sophisticated and expensive devices, e.g. television, films, computers, etc., have been found to be possible methods of teaching in developed countries. In developing countries the cost may be a barrier to their use. The cheaper techniques of radio, tape recorders, slides and the reading of printed words have all their values, which can be critically examined. It was suggested that universities should have a resource-cum-service centre for educational technology.

Learning activities outside the normal classroom environment were emphasized. Various programmes, e.g. study-service, work-study, service-learning programmes were discussed. Such programmes could offer a significant contribution to the well-being of the community, provide a valuable experience to the participants, and also provide feedback which help to bring about re-evaluation and subsequent changes of curricula to meet the real needs of the community.

The use and misuse of examinations was considered. Examinations should be viewed as a part of the comprehensive measurement and evaluation of the educational needs, processes and outcomes.

Much more attention needs to be given to the professional preparation of university teachers. Various programmes and their impacts were discussed, e.g. teachers' workshop, problem-solving group discussions, and other devices for the reinforcement of innovative teaching. It was recommended that the establishment of centres devoted to the advancement of university teaching, which would provide educational and technical services, and also include a clearing house to process and distribute information about educational development in various institutions.

STUDENT ACTIVISM

Various factors were thought to have contributed to student activism in many universities in the region, e.g. the rapid increase of student numbers, the concentration of university population within small areas, the introduction of value systems and ethics from the rural environment, the examination system and educational administration, student activities in neighbouring countries, etc. The public response to this student activism has been one of concern, and this sometimes led to the passing of restrictive legislation and greater public involvement in universities' internal affairs. From a positive point of view, student activism reflects youthful idealism, which may induce dynamism, creativity, productivity and a vision for the future. This activism should be channelled into doing constructive things in harmony with the educational process in the higher education system and the stability of the community.

In the teaching-learning processes students can provide feedback to monitor the educational processes, so that output can be improved. The actual mechanics of the student participation, the manner of assigning responsibilities to students, the manner of seeking feedback, the focus on direct and indirect involvement of student seems to be determined by the various circumstances.

PREREQUISITES FOR DEVELOPMENT

The prerequisites for the initiation of new approaches to teaching-learning processes are: the existence of an initiating nucleus within the institution of higher education, a high-level of faculty scholarship, a strong social and ideological drive, training programmes and a central planning mechanism to spread the new ideas.

To be able to contribute effectively to development, certain necessary conditions must first be fulfilled by institutions of higher education, i.e. the identification of needs, formulation of objectives, acquisition of effective moral and financial support, existence of plans and programmes to attain objectives, ability to relate education, research and service, utilization of multi-disciplinary approach to solve problems, ability to build on past history of inter-faculty collaboration, ability to measure and evaluate its contribution, capability to discover, innovate and adapt, ability to interact and be interdependent with other educational subsystems.

REGIONAL COOPERATION

It was noted that each institution of higher education in the region is unique. However, in seeking ways and means to improve the teaching-learning processes, the institutions of higher education in the region have many problems in common. Regional cooperation can facilitate exchange of ideas, experience, information and other facilities.

RECOMMENDATIONS

1. A balance must be maintained between the three major functions of higher education, i.e. education, research and public service.
2. The planning and management of higher education should be sensitive to environmental change.
3. Higher education should be made accessible to those desiring it and qualified to accept it.
4. Higher education should be designed that it serves both the needs of the nation and the needs of individual student.
5. Curricula should be problem-oriented.
6. New disciplines and multi-disciplinary programmes should be encouraged.
7. Study-work programmes should be intensified to bring students into closer contact with the realities of their society.
8. Lifelong learning should be realized, and to this end universities should develop innovative programmes, e.g. recurrent education, extension education, non-formal education, etc.
9. Research into the applications of new educational technologies and improved evaluation systems is needed. Educational facilities, e.g. library, educational technologies, etc., should be improved to increase the efficiency of learning processes.
10. Student activities should be channelled into doing constructive things in

harmony with the educational process. Students could provide feedback to improve the effectiveness of teaching-learning processes.

11. Faculty development programmes, e.g. in-service courses, seminars, workshops, conferences, etc., should be intensified with the aim of upgrading knowledge and improving the effectiveness of teaching. To this end, a centre for the advancement of university teaching should be established.
12. Teacher effectiveness needs to be evaluated. Rewards and incentives can then be utilized to encourage effective teaching.
13. There is need for a conceptual change in the public acceptance and evaluation of degrees and diplomas as measures of higher education.
14. There should be more opportunities for staff and student exchanges between institutions of higher education in the region.
15. RIHED should facilitate research and exchange of information regarding teaching-learning processes and educational development in institutions of higher education in the region.

APPENDIX

PROGRAMME OF RIHED REGIONAL CONFERENCE

Thursday, 11 December 1975

0830 — 1030 **Official Opening**

Welcoming Address by Dr. Amnuay Tapingkae,
Director of RIHED

Opening Address by Dr. Mahathir bin Mohamad,
The Honourable Minister of Education, Malaysia

1030 — 1130 **Opening Session**

Chairman:
Tan Sri Raja Azlan Shah

Keynote Address:
"Challenges for Higher Education in Southeast Asia"

Speaker:
Dr. Makaminan Makagiansar

1315 — 1445 **Session 1**

Chairman:
Prof. Prajudi Atmosudirdjo

Paper 1:
"Higher Education in Asean Countries Today"

Speaker:
Mr. Gwee Yee Hean

Discussants:
Prof. D.A. Tisna Amidjaja
Dato' Abdul Rahman bin Arshad
Mr. Saneh Chamarik

1500 — 1630 **Session 2**

Chairman:
Prof. D.A. Tisna Amidjaja

Paper 2:
"Changing Profiles of University Students in Southeast Asia"

Speaker:
Dr. Nuanpen Wichiarajote

Discussants:
Prof. A. Amiruddin
Dr. Seah Chee Meow
Tan Sri Mohd. Rashdan Haji Baba

1630 — 1730 **Group Discussions 1**

Friday, 12 December 1975

0900 — 1030 **Session 3**

Chairman:
Dr. Wichit Srisa-an

Paper 3:
"A Critical Assessment of University Teaching"

Speaker:
Dr. Hulman Sinaga

Discussants:
Dr Willi Toisuta
Mr. Pradit Wichaiyadit

1045 — 1215 **Session 4**

Chairman:
Dr. Tan Tiong Hong

Paper 4:
"Curriculum Development in Southeast Asian Universities: New Approaches"

Speaker:
Dr. Partomo Alibazah

Discussants:
Dr. Francis Wong Hoy Kee
Dr. Wichit Srisa-an

1315 — 1445 **Session 5**

Chairman:
Mr. Pradit Wichaiyadit

Paper 5:
"Alternatives for Teaching-Learning Processes in Southeast Asian Universities"

Speaker:
Dr. Ernesto O. Javier

Discussants:
Dr. Prapont Piyaratn
Dr. Chin Long Fay

1500 — 1730 **Group Discussions 2**

Saturday, 13 December 1975

0900 — 1215 **Group Discussions 3**

1315 — 1515 **Session 6**

Chairman:
Dr. Chetana Nagavajara

"Report of Group Discussions"

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